

**PROVISIONING OF WATER AND SANITATION SERVICES IN GA-KGAPANE
TOWNSHIP, LIMPOPO**

BY

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DECLARATION

I hereby declare that the work presented in this mini-dissertation is my original work and it has never been presented to any university or institution.

.....

Signature

.....

Date

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First and foremost, let me thank the Almighty God who made it possible for me to be where I am today as it was not an easy journey to work in different and demanding tasks every day. Sincere thanks go to my family for being supportive during my difficult study period. Thanks to my beautiful daughters: Amo, Kobi, Kamo, Modjadji, Mandle and Lindi, for their understanding and for walking with me throughout my journey. To my fellow students; comrades and colleagues, thank you for your support. To all my lecturers and former supervisors, you were my inspiration and laid a good foundation for me, to be an academic and your efforts will never be in vain. Through the Grace of God, I will reach my academic goals.

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DEDICATION

This work is dedicated to the residents of Ga-Kgapane and to my late brother, Jones 'Flamingo' Modjadji, a political and social activist of note. May his soul rest in peace.

ABSTRACT

This study is about an investigation into the provisioning of water and sanitation services in Ga-Kgapane Township in the Limpopo Province. Since the year 2002, the residents of Ga-Kgapane Township live without sufficient water supply services. Residents receive tap water once a week and they depend on supply from water tankers for the rest of the week. This township has a water borne sewage system and most of the households have indoor toilets.

The study used a mixed method because it had incorporated both elements of qualitative and quantitative methodologies in its approaches. The research instruments such as semi-structured interviews, questionnaires, documentary data extraction and observations were used to collect information. The study's sample size comprised of 77 key participants and informants from Mopani District Municipality (Water Services Authority); Lepelle-Northern Water Board (implementing agency and bulk water supplier); Greater Letaba Municipality (Water Service Provider); Ward Councillors and community members (end-users).

The research findings revealed that Ga-Kgapane Township's water and sanitation provision challenges are due to insufficient or lack of water, poor water management and poor governance. It was also discovered that the MDM and GLM have failed to translate the rights to water and sanitation into law, policy, budget and service provision for the Ga-Kgapane Township residents. The insufficient water supply challenge resulted in some community members migrating to other areas where there is better basic service provision. The residents failed to exploit the economic development opportunities which resulted in health risks as they were exposed to danger due to burst sewer pipes which spewed raw sewerage water on the streets. The sewage contaminated the township's natural streams.

This study's findings could form a basis for future research on the effectiveness of the MDM's Water Services Provision Agreement which was signed with the district's local municipalities. The Mopani District Municipality has for many years

received undesired audit opinions ranging from 'Adverse to Disclaimer' notices. This affects the local municipalities too as they are all qualified-on water transactions. As part of the recommendations, the study proposed that the Greater Letaba Municipality should utilise the Intergovernmental Relations Forum to address the plight of the provision of water and sanitation services in Ga-Kgapane Township.

KEY WORDS

Accountability; Service delivery; Sewerage; Stakeholders; Respondent; Insufficient water supply; Human rights; Public participation; Sanitation and Intergovernmental relations.

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LIST OF ABBREVIATIONS

AFS	Annual Financial Statement
AMCOW	African Minister Council on Water
AU	African Union
DBSA	Development Bank of South Africa
DoRA	Division of Revenue Act
DWA	Department of Water Affairs
DWAF	Department of Water Affairs and Forestry
DWS	Department of Water and Sanitation
ECA	Economic Commission for Africa
EU	European Union
FBS	Free Basic Services
GLM	Greater Letaba Municipality
IDP	Integrated Development Plan
ICESCR	International Covenant on Economic, Social and Cultural Rights
IGRFA	Intergovernmental Relations Framework Act
IMF	International Monetary Fund
IWRM	Integrated Water Resource management
LNWB	Lepelle-Northern Water Board
MDG	Millennium Development Goals
MDM	Mopani District Municipality
MEC	Member of Executive Council
MOU	Memorandum of Understanding
MWIG	Municipal Water Integrated Grant
NDP	National Development Plan
NEMA	National Environment Management Act
NEPAD	New Partnership for Africa's Development
OAU	Organisation of African Union
OTP	Office of the Premier
PFMA	Public Finance Management Act

RSA	Republic of South Africa
SADC	Southern African Development Community
SAHRC	South African Human Rights Council
SALGA	South African Local Government Association
SCOWSAS	Standing Committee on Water Supply and Sanitation
SMME	Small Micro-Medium Enterprises
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational Scientific and Cultural Organization
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
UNW-DPAC	United Nations Water-Decade Programme on Advocacy and Communication
USA	United States of America
WHO	World Health Organisation
WSA	Water Services Authority
WSS	Water and Sanitation Services
WSDP	Water Services Development Plan
WSP	Water Services Provider

CHAPTER 1: BACKGROUND TO THE STUDY

1.1 Introduction and background

Before South Africa's democratic government in 1994, the provision of basic services was influenced by severe racial and regional inequalities as it was based on race and ethnicity as reflected in the homelands system. This distribution of basic services pattern created huge disparities and inequalities between the black population in Ga-Kgapane and the white communities in former Duiwelskloof, which is now called Modjadjiskloof. According to STATS-SA (2001), population in South Africa was at 44.8 million and it was estimated that 12 million people lived without adequate water supply services and nearly 21 million people without proper sanitation services (Republic of South Africa, 2003). Most of these people were Blacks who resided in townships and rural villages.

South Africa's new democratic dispensation brought a ray of hope to many citizens including the people of Ga-Kgapane Township, as it progressively reformed many apartheid pieces of legislation and policies to eradicate the racial and oppressive legacy of the former apartheid government. These new policies and regulations were formulated to achieve equitable access to basic resources and to improve the South Africans' quality of life.

Most of the legislations have been developed through democratic processes in consultation with the South African citizens. The policies include but are not limited to, The Constitution of South Africa, 1996; Local Government: Municipal Structures Act, 1998; Local Government: White Paper on Local Government, 1998; Local Government: Municipal Systems Act, 2000; Local Government: Municipal Financial Management Act, 2003; Water Services Act, Act No 108 of 1997; Intergovernmental Relations Framework Act, 2005 and the Public Finance Management Act, 1999. Section 155 (6) (a) and (b) of the Constitution of the Republic of South Africa provides for the establishment of the republic's municipalities. Section 12 of the Municipal Structures Act, 1998 allows the provincial Member of the Executive Council (MEC) for the local government, by notice in the Provincial Gazette to establish a municipality in each municipal area as per the Demarcation Board's instruction in terms of the

Demarcation Act (Cloete & Thornhill, 2005). The Mopani District Municipality (MDM) and the Greater Letaba Municipality (GLM) were amongst the first municipalities that were established respectively in 2000, in the Limpopo Province. These municipalities were allocated different responsibilities as per Section 156 (2) of the Constitution of the Republic of South Africa, 1996. The responsibilities included but were not limited to the provision of basic services such as water and sanitation, by-laws and the building of municipal roads.

However, in the Mopani District Municipality, all five local municipalities are not Water Service Authorities (WSA). A WSA is an institution that has a constitutional mandate to plan, ensure access to and regulate the provision of water services within its area of jurisdiction (Manamela, 2010). The WSA's responsibility has been allocated to the Mopani District Municipality. All local municipalities have signed the Memorandum of Understanding (MOU) with the Mopani District Municipality to provide water and sanitation on its behalf (Mopani District Municipality IDP, 2015/16). Even though the Water Services Act, Act No 108 of 1997 and the Strategic Framework for Water Services, 2003 emphasise that "water is life, sanitation is dignity", the residents of Gakgapane Township live without water and sanitation services for more than five days every week. They receive tap water once a week and throughout the week they depend on water tankers.

The Department of Water Affairs and Forestry developed a Strategic Framework for Water Services in 2003 and it sets out a comprehensive approach with respect to the provision of water services in South Africa, ranging from small community water supply and sanitation schemes in remote rural areas to large regional schemes supplying water and wastewater services to the people and industries in the largest urban areas (Republic of South Africa, 2003). The framework further outlines the required approach changes in order to achieve policy goals because of the progress South Africa has made in establishing democratic local governments and developments in the sector since 1994.

Water services refer to water supply and sanitation services, including water schemes, on-site sanitation and the collection as well as the treatment of waste water. Water

and waste water services are essential for health, life, for business and for the industries. The provision of these services can eradicate poverty and promote economic development (Machethe, 2011).

1.2 Problem statement

The Ga-kgapane Township residents have lived without bulk water supply services for more than five days every week for some years. The residents receive tap water once a week and throughout the week they depend on supply from water tankers. This township has a water borne sanitation system as many of the households have indoor toilets. The dawn of democracy brought hope to these residents as they thought that their township would receive basic services as is the case with their white counter parts as envisaged in the section 2(a) of the Water Services Act, 1997. The expectations and constitutional obligation on the provision of water were not met as many households still do not get water regularly as in terms of Section 27(1) (a) of the Constitution of RSA which states that: “Everyone has the right to sufficient food and water”.

According to the Greater Letaba Municipality (2013), the water and sanitation infrastructure is old and it is collapsing and the population increase has resulted in the shortage of water, sewage blockages and leakages. The infrastructure is dilapidated and comprises of asbestos water pipes which pose a health hazard to the community. A shortage of water also contributes towards the sewage blockages because it is difficult for solid waste to flow within pipes without water. In some other parts of the township such as in Parktown and Mzimhlope sections, sewage pipes are collapsing due to age and the waste water discharge is spilling into the natural water streams (Greater Letaba Municipality, 2014). This has negative consequences to the natural environment, human beings and other living species. The sewage spillage into the natural streams may result in the outbreak of water-borne diseases which include but are not limited to cholera, bilharzia and amoebic dysentery. Water and land pollution are seen to be against the National Environmental Management Act, 1998.

These challenges resulted in some community members migrating to other areas where there is better basic services provision. Statistics South Africa (2011) revealed that the Greater Letaba Municipality population has decreased by 35 038. The decrease was as a result of migration to other areas which provide better services, job opportunities and natural attrition. The value of properties also depreciated which made it difficult for the owners to sell their properties at the expected rate when compared to other townships. This was also exacerbated by the continuous media publicity as pictures of leaking sewerage systems in Meloding Section at Ga-Kgapane appeared in one of the Bulletin Newspaper articles of 04 August 2014 (Sakuneka, 2014). Due to this non-provision of sustainable water supply and sanitation services at Ga-Kgapane Township, the community started to embark on mass protests as a way of complaining about the matter.

Even though the MDM is the Water Services Authority, the Ga-Kgapane residents keep on embarking on service delivery protests in the Greater Letaba Municipality (GLM). In alleviating, some of the protests, the GLM uses its resources to supply the community with water which is against the Municipal Finance Management Act, 2003 (Republic of South Africa, 2014).

On the above basis, the researcher decided to investigate how the Mopani District Municipality and other stakeholders provide water and sanitation services to Ga-Kgapane Township.

1.3 Motivation/rationale of the study

The study of the provisioning of water and sanitation at Ga-Kgapane Township has been motivated by media publicity and the outcry of community members who experience problems on the provision of basic services such as water and sanitation on a daily basis. The lack of water in Ga-Kgapane is negatively affecting the residents' livelihood and development. This is against the provisions enshrined in the Constitution of the Republic of South Africa, 1996, and the Water Services Act, Act No 108 of 1997. The DWAF's (2003) Strategic Framework for Water Services states that, "the supply of water and sanitation services has significant potential to alleviate poverty

through creation of jobs, use of local resources, improvement nutrition and health, development of skills, and provision of a long-term livelihood for many households”.

This study will generate new knowledge as it is going to focus on the institutions that are responsible for the provision of water in Ga-Kgapane. Furthermore, this study will propose solutions to challenges around the provision of water and sanitation services in Ga-Kgapane Township.

1.4 The significance of the study

The Constitution of South Africa, 1996 Section 27 (1) (b) declares that everyone has the right to have access to sufficient food and water. Section 27 (2) further declares that the state must take reasonable legislative action and other measures, within its available resources to achieve the above mentioned right. Moreover, the Water Services Act 108 of 1997 emphasised that all spheres of government must ensure that water supply and sanitation services are provided in a way that is efficient, equitable and sustainable. This study will explore ways to resolve and improve the quality of water supply and sanitation services to the community of Ga-Kgapane by informing both policy and practice in terms of how water should ideally be delivered to the township’s citizens.

1.5 Aim of the study

The aim of the study is to investigate the provision of water and sanitation services in Ga-Kgapane in the Limpopo Province.

1.6 The objectives of the study

The objectives of the study are to:

- (i) Assess how stakeholders through intergovernmental relations contribute towards the provision of water and sanitation in Ga-Kgapane;
- (ii) Evaluate how MDM implements its Integrated Development Plan (IDP) as a Water Service Authority in Ga-Kgapane;
- (iii) Assess the challenges faced by various stakeholders in the provision of water and sanitation in Ga-Kgapane;

(iv) Determine the fundamental approaches that are required to improve the provision of water and sanitation in Ga-Kgapane

1.7 Research questions

The study research questions are as follows:

(i) How does MDM relate with other stakeholders in the provision of water and sanitation services in Ga-Kgapane?

(ii) How does MDM develop and implement its Integrated Development Plan (IDP) as a water service authority in Ga-Kgapane?

(iii) What are the challenges faced by various stakeholders in the provision of water and sanitation in Ga-Kgapane?

(iv) What are the fundamental approaches that are required to improve the provision of water and sanitation in Ga-Kgapane?

1.8 Definition of concepts

Water supply means the abstraction, conveyance, treatment or distribution of portable water (Machethe, 2011).

Water Service Authority (WSA) means an institution that has a constitutional mandate for planning, ensuring access to and regulating the provision of water services within its area of jurisdiction (Mnisi, 2011).

Integrated water resources management is a process which promotes the coordinated development and management of water, land and related resources in order to maximise economic and social welfare in an equitable manner without compromising sustainability of vital eco-systems and the environment (Persson, 2009).

District Municipality is a municipality that has executive and legislative authority on an area that includes more than one municipality (Monashane, 2011).

Basic water supply is defined as a supply of a minimum of 25 litres of potable water per day or 6000 litres per household per month within 200m of a household (DWAF, 2002).

Potable water is fresh water supplied for human survival, health and dignity coming from a common pool natural resource for which everyone is responsible (Musingafi & Chadamoyo, 2013).

Water-User Associations are cooperative associations of individual water users who undertake water-related activities at local level for their mutual benefit (DWAF, 2003).

Sanitation is the hygienic means of preventing human contact with the multiple hazards associated with waste in order to promote health (Okonkwo, 2010).

Water service provider is any person or institution which has a contract with the Water Service Authority or another service provider to sell water or accept waste for the purpose of treatment from bulk service providers (Monashane, 2011).

Human right to water is the right held by every individual, regardless of who they, or where they live and it safeguards their access to water for personal and domestic uses (Pillay, 2014).

Privatisation is defined as a process which entails the reduction of the role of the government in assets ownership and service delivery and an increase in the role of the private sector (Chirwa, 1998).

Bulk Water Supply is a means of delivering or conveying potable or non-potable water for everyday use and emergency situations (Letsoalo, 2012).

1.9 Outline of the dissertation

Chapter 1: Introduction

This chapter will cover the study's historical background, problem statement, significance of the study, motivation, research aim, objectives and the definition of the study's concepts.

Chapter 2: Literature Review

The Literature Review will present the literature which is related to the provision of water and sanitation services, including the associated legislations and policies.

Chapter 3: Research Methodology

Chapter three will explain the research methodology which entails the study area, population, research designs, sample size, sampling method and the ethical issues.

Chapter 4: Research Findings

This chapter will present the research findings and the study's data analysis.

Chapter 5: Recommendations and Conclusion

The chapter will comprise of the study's summary as well as the recommendations and conclusion of the findings.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The previous chapter covered the background of the study; the problem statement; the rationale on why the study should be conducted; the study's objectives as well as the questions that were used to investigate the causes of the problem in the study.

This chapter will review other researchers' work and literature about the global provision of water and sanitation services which includes the roles of multi-nations' organisations such as the United Nations (UN) and the African Union (AU). It will further highlight the provision of water and sanitation services in South Africa, starting from the national to the local spheres of government which subsequently overlap to the roles of district and local municipalities in the provision of water and sanitation services in Ga-Kgapane. This highlight will explore the legislations that are used in the provision of water and sanitation services, as well as the involvement of water service sectors in the Mopani district and in Ga-Kgapane Township.

2.2 Provision of water and sanitation globally

Water and sanitation are no longer national issues as they are a general concern worldwide. Human rights to water and sanitation entitle everyone to sufficient, safe, acceptable, physically accessible and affordable water and sanitation for both personal and domestic uses. These rights should be understood as guideposts for regulation, monitoring and oversight which must be critical when governments or private entities deliver water and sanitation services to the people (De Albuquerque, 2014). This chapter highlights the role played by the United Nations in ensuring that member states and other countries around the world make access to water supply and sanitation

services their priorities. Like most African and Asian countries, South East Europe has been cited as a critical region in Europe where the provision of water and sanitation remains a serious challenge, unlike in other parts of that continent. Factors that attribute to the failure of meeting basic water and sanitation services are flagged in this review.

The United Nations' General Comment No: 15, categorically states that human rights to water and sanitation must be provided to ensure human dignity, life and health.

Murthy (2013) points out that water is not meant only for survival, but also for cultural, religious and spiritual relationships with human beings. The author further emphasises that economically, even if water does not have an economic value at the time of consumption, it is converted into a commodity when used for agriculture or industrial products. These are the reasons why all governments and states must focus on its availability, quality, safety, accessibility, affordability, impact, sustainability, as well as ensuring that communities participate in its provisioning (United Nations Report, 2010).

“In order to implement the human rights to water and sanitation, states must ensure that existing legal, policy and regulatory frameworks incorporate human rights considerations, and reform them where this is not the case. Without a clear legal framework, the state cannot be held accountable by the individuals, or ‘rights-holders’, who live within its jurisdiction” (De Albuquerque, 2014).

2.2.1 The role played by the United Nations in the provision of water and sanitation

The UN General Assembly and the Human Rights Council reaffirmed the recognition of water and sanitation as human rights in July 2010 and September 2010 respectively. This came after the International Covenant on Economic, Social and Cultural Rights (ICESCR) adopted General Comment No. 15 on the human rights to water. These committees realised that the water and sanitation crisis brought negative health and economic consequences which affected the general well-being of many people across the world (United Nations' ICESCR Report, 2010). The World Health Organisation (2004) reported that many death cases across the world are as a result of unsafe drinking water, lack of sanitation and hygiene.

The most identifiable burden of diseases attributed by unsafe water, lack of sanitation and hygiene are diarrhoeal; intestinal parasites and schistosomiasis (WHO Report, 2004). The people who suffer the most are those who come from poor backgrounds and predominantly from under-developed as well as developing countries around the world. The World Health Organisation estimates that there are 0.75 cases of diarrhoea per person worldwide every year. This rate varies between regions with sub-Saharan Africa having the highest rate of 1.29 cases per person annually. In contrast, rates in Europe and the United States of America (USA) are 0.18 and 0.07 cases per person per year respectively (WHO Report, 2004). The South African Medical Journal (2007) reports that an estimate of 13 434 deaths were attributable to unsafe water, sanitation and hygiene thereby accounting for 26% of all deaths in South Africa in 2000. The burden was more visible in children under the age of five, who accounted for 9.3% of the total deaths in this age group and 7.4% of the burden disease.

The UN has discovered that rights to water are indirectly included in the human rights to an adequate standard of living and the right to health. Therefore, it is imperative that access to water and sanitation is required for the realisation of other human rights such as housing, health, education and life (United Nations Report, 2010).

Article 2(1) of the ICESCR advises states to take steps to progressively realise economic, social and cultural rights, as well as to move as quickly and effectively as possible towards the full realisation of the human rights to water and sanitation, using the maximum available resources (Juuti & Maki, 2005).

To realise the United Nation's objectives on declaring human rights to water and sanitation, the UN Special Rapporteur, Catarina de Albuquerque documented a handbook to provide practical advice for both state actors and civil society stakeholders for a better implementation. The state actors are considered by the UN as the main bearers of human rights obligations and they have a legal duty to the people who reside within their area of jurisdictions (United Nations Report, 2010). According to De Albuquerque (2014), the United Nations should encourage all world state actors to incorporate human rights to water and sanitation in their institutional regulatory and legal frameworks, into their budgets and service-delivery processes as

well as in their accountability mechanisms. The author further explained that in that way, the states are expected to formulate and determine policies or other legislative frameworks that will ensure that this right is realised, especially on personal and domestic uses to protect the poor and marginalised societies.

In its report, the WHO (2004) indicates that to deal with the global crisis of unsafe water, sanitation and hygiene, the states should take reasonable effort to protect the poor, marginalised and disadvantaged individuals and groups by using targeted programmes, among other approaches. That is one of the reasons why in 2013 the UN General Assembly and the Human Rights Council reaffirmed the recognition of the human rights to water and sanitation in consensus (De Albuquerque, 2014). According to the UN Covenant as contained in the UN report (2010), the obligation to respect, protect and fulfil human rights in a participatory, accountable and non-discriminatory way is a duty that is immediately binding. The failure to do so is contrary to the obligation of states under the covenant. General Comment No. 15 on the human rights to water and the Special Rapporteur's Report on the right to sanitation mandated UN member states:

- (i) To respect the human rights to water and sanitation by not preventing people from enjoying their human rights to water and sanitation; for example, by selling land with a water source on it that can be used by the local population without providing an adequate alternative, thus preventing users from continuing to access the source;
- (ii) To protect the human rights to water and sanitation by preventing third Parties from interfering in any way with the people's enjoyment of the human rights to water and sanitation;
- (iii) To fulfil the human rights to water and sanitation by ensuring that conditions are in place for everyone to enjoy the rights to water and sanitation.

This very General Comment No 15 extends obligations of states beyond their physical borders in a form of 'extraterritorial obligations', which cautions that states parties must never use water as an instrument of political or economic pressure. States must not

impose embargoes or similar measures that prevent the enjoyment of the human rights to water and sanitation. All state parties have extraterritorial obligations to respect the human rights of people in other countries (De Albuquerque, 2014).

2.2.2 Global challenges in access to water and sanitation

The conclusion of the MDGs and the advent of the post 2015 era serve as evidence that many countries in the world failed to translate the rights to water and sanitation into law, policy, budgets and service provision (UNW-DPAC, 2015). The lack of access to piped water supply and proper sanitation in the form of sewerage systems is still a global challenge, especially in sub-Saharan Africa, South Asia and the South East of Europe (Roberts, Stickley, Gasparishvili, Haerpfer & Mckee, 2012).

There are numerous identified challenges that may have led to the above-mentioned failures and these include but are not limited to:

- Lack of water and sanitation infrastructures;
- Poor maintenance plans;
- Poor governance; • Insufficient state funding;
- Natural hazard.

2.2.3 An example of significant challenges of the provision of water and sanitation services in Europe

Lack (1999) cites that a challenge of universal access to safe drinking water and sanitation contributes to the wealth and health of nations and they could be prejudiced by the unsustainable use and management of water. The author further indicates that even though many parts of Europe are well provided with piped water, it is unevenly distributed between and within countries and there are shortages in several areas, especially in the rural East of Europe. The World Health Organisation revealed that the majority of East Europe countries are affected by many outbreaks of waterborne diseases mostly attributed to the lack of fresh drinking water and adequate sewerage systems. It is further reported that over 11 years, 2.5 million cases of gastrointestinal and other waterborne diseases were reported and 2% of these were linked to drinking water (World Health organisation, 2004).

A study conducted by Roberts et al. (2012) shows that in the South-Eastern Europe, the majority of countries in the region depend heavily on ground water sources such as springs, aquifers and karsts for domestic as well as for industrial uses. For example, it shows that in Serbia and Montenegro, groundwater sources supply 90% of domestic and industrial needs. About 70% of the cities in Albania are supplied by groundwater wells. The study further states that in Bosnia and Herzegovina, 89% of total piped water supplies come from groundwater sources while proper sewer systems are available to about 54% of the population who are mostly urban areas residents. The authors also indicate that there are low ratios of wastewater treatment in the South-eastern Europe, for example: Albania has 0%, Serbia and Montenegro 6%, Bosnia, Herzegovina and Macedonia 10%, 20% for Croatia, 37% in Bulgaria and 40% in Romania (Roberts et al, 2012). It was also supported by Murthy (2013), who cites that untreated wastewater is a major source of contaminants for both surface and groundwater sources in the South-Eastern Europe.

Roberts et al. (2012) concede that the failure to meet basic water and sanitation requirements is more visible in the poorest region of east Europe and it is prevalent in distinguishing the east and west parts of Europe. The east and west divide Europe in terms of the availability of safe drinking water; with countries in the east of Europe having a much lower level of access to public water supplies. It is evidence that the majority of the east part of Europe has limited access to running water they are predominantly former Soviet Union countries that include Belarus, Kazakhstan, Moldova, Ukraine and Kyrgyzstan.

In a study conducted between 2001 and 2010 in seven former Soviet Union countries, it was discovered that the changes brought by access to piped water in the households had a bearing on the demographic characteristics, social, economic and lifestyle characteristics and a range of self-reported health conditions. The poorer groups in all the countries benefited less than the richer groups during the 10-year period, for example households with a bad/very bad economic situation not having piped water in the home reduced by one-third, while the households with a good/very good economic situation reduced by half. Generally, the study provided valuable evidence that access to piped water in the former Soviet Union countries has improved whilst

there were significant gaps particularly in the rural and poorer households (Roberts et al., 2012).

On the other hand, Murthy (2013) emphasises that linking human rights to water and sanitation has been an important vehicle for communities around the world to raise attention to perceived inequities and injustices in access to a vital natural resource and to services that have significant public health implications. In many instances, this right became a rallying call for political and social anti-privatisation movements that sought to keep water as a public good that would be accessible to everyone.

According to a UN Report (2010), human rights to water and sanitation were explicitly recognised only in 2010 by the United Nations Assembly and the Human Rights Council; thereafter many countries incorporated them into their constitutions and national legislations. That was the reason why, the International Covenant on Economic, Social and Cultural Rights introduced 'the Optional Protocol' in 2013. The Optional Protocol serves as a complaint mechanism to allow individuals or groups to file a formal complaint on violations of human rights to water and sanitation, among other rights (De Albuquerque, 2014). The UN High Commission for Human Rights defines the human right to water as rights held by every individual, regardless of who they, or where they live and it safeguards their access to water for personal and domestic uses.

2.3 Provision of water and sanitation services in a continental context

The United Nations' General Comment No: 15 urges all member states to ensure that the human right to water and sanitation is realised. This noble call was cascaded down to regional organisations in the world's continents. Therefore, this section will consider the role of the African Union (AU) and the establishment of the African Ministers Council on Water (AMCOW) on the provision of water and sanitation services in the African continent. It will also trace the role of the New Partnership for Africa's Development (NEPAD) on ensuring the sustainability and equitability management of water resources in Africa by the governments and the people.

2.3.1 The role of the African Union (AU) in the WSS

The International Conference on Fresh Water held in Bonn on the 7th of December 2001 acknowledged the report from the United Nations Conference on Environment and Development (UNCED) that more Africans lack access to safe water and sanitation, which results in economical setbacks and humanitarian degradation (AMCOW Handbook, 2007). In the declaration, the conference called upon the cooperation of Africa and the international community to support a regional and global alliance for tackling the water and sanitation problems in Africa.

This assertion gives evidence to the factor that despite all the efforts taken, there is still a disjuncture between decisions taken at the UN General Assembly and the practical realities of the lives of the people around the world. This is not only to deprive people's basic human needs, but it also infringes on their human rights too.

De Albuquerque (2014) suggests that the above-mentioned disjuncture might have been caused by the fact that when the International Covenant on Economic, Social and Cultural Rights (ICESCR) dedicated economic, social and cultural rights within the International Human Rights Framework, the issue of mentioning water explicitly was omitted with the assumption that water, like air, was already freely available to all. The author further advocated that the time when the United Nations General Assembly adopted the universal declaration of Human Rights in 1948, colonialism was at its highest peak and those countries whose populations suffered from the lack of access to water and sanitation were not directly represented at the negotiation table of the UN General Council.

In order to rectify the above-mentioned omission and to align the continent with the UN General Comment No: 15, the African Ministers' Council on Water (AMCOW) was officially launched in Lagos, Nigeria in April 2002 (AMCOW Handbook, 2007). The African Ministers Council on Water (AMCOW) was established almost a year after the formation of the African Union (AU) by the Heads of States and the government of the then Organisation of African Union (OAU). The formation of AMCOW was seen as a step in the right direction by the AU Commissioner for Rural Economy and Agriculture to show case how African governments can take control of their own development;

and it was supported by the AU Commission, NEPAD, African Development Bank, Members of UN Water/Africa, African Civil Society Groups, EU, Development Cooperation Partners, the United Nations and the financial institutions (Okokpari, Muvumba & Murithi, 2011). This initiative was a stepping stone to advance the implementation of the UN's recommendation which advocates that states must devise strategies to make access to water and sanitation a reality.

In 2004, the African Extraordinary Session of the Heads of States and Governments held in Libya adopted the Sirte Declaration where African Leaders expressed their support for AMCOW and for its role in efforts to address the African water challenges. AMCOW was formed to provide political leadership, policy direction and advocacy for the protection, management and wise utilisation of all African resources for sustainable social, economic and environmental development, and for the maintenance of the integrity of Africa's ecosystems in furtherance of the AU's vision and the NEPAD goal (AMCOW Handbook, 2007). The objectives of AMCOW among others include to:

- Plan and manage water resources to become a basis for national and regional cooperation and development;
- Co-operate on shared rivers among member states;
- Ensure sustainable access to safe, adequate clean water supply and sanitation for the poor;
- Encourage mechanisms that promote best practice in water policy reforms, integrated water resources management, food security, water supply and sanitation, and also assist in delivery of national, sub-regional and regional programmes.

Another significant effort by the AU to address the water and sanitation issues was the 2002 Abuja Ministerial Declaration on Water. This declaration noted the need of humanity for adequate supplies of freshwater, both for its survival and for social and economic development. The 2002 Abuja Conference declared that an adequate supply of freshwater is the most important precondition for sustaining human life, maintaining ecosystems that support all life and for achieving sustainable development. The declaration further highlighted the inescapable reality which indicates that without adequate supplies of clean, safe water, people will suffer and

many will die prematurely, ecosystems will cease to perform their human-sustaining functions and the potential for social as well as economic development will be drastically reduced (AMCOW Handbook, 2007).

In the treaty, establishing the African Union and the New Partnership for Africa's Development (NEPAD), Heads of States and government acceded to the fact that the destiny of the African continent is in the hands of its people. Therefore, the AU and NEPAD recognise that the primary responsibility for ensuring the sustainable and equitable management of water resources in Africa rests with governments and the people (NEPAD, 2001). One of NEPAD's objectives on water and sanitation is to ensure that there is sustainable access to safe and adequate clean water supply and sanitation, especially for the poor (Sesani, 2005).

This decision agrees with the very important clause in the UN General Comment No: 15 which dictates to all member states the need to make sure that human rights to water and sanitation are realised through focusing on availability, quality, safety, acceptability, accessibility, affordability, non-discrimination, participation, accountability, impact, and sustainability (Murthy, 2013). In the very same spirit, NEPAD issued directives to its member states to put mechanisms in place for proper governance of water affairs at all levels (NEPAD, 2001). The UN Special Rapporteur, recommended to the UN member states that there is a need to direct their efforts to create institutions and structures that are necessary for enabling an environment that ensures that everyone can exercise their rights while prioritising matters of water and sanitation services in their agendas (De Albuquerque, 2014).

It was clear from the NEPAD Report (2001) that the water and sanitation objectives were in line with the United Nations' International Conference on Water and Environment held in Dublin in 1992, which adopted the following four key principles:

- (1) Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment;
- (2) Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels;

- (3) Women play a central part in the provision, management and safeguarding of water;
- (4) Water has an economic value in all its competing uses and should be recognized as an economic good.

The African Union and the United Nations initiated the, “African Water Vision for 2025” in an attempt to promote equitable and sustainable use of water for socioeconomic development in Africa. A partnership meeting for implementing the Water Vision 2025 was convened in Addis Ababa, to initiate an action-oriented continental partnership with potential partners and to sign a Memorandum of Understanding (ECA, AU & African Development Bank, 2015).

2.3.2 Challenges in access to water and sanitation services in Africa

The UNICEF Report (2010) reports that there is slow progress in increasing access to clean water and sanitary toilets facilities in sub-Sahara Africa, which also affects children. The report estimates that out of three people, two lack access to proper sanitation; and 40% get their drinking water from unclean sources. Waggoner (2011) alludes to the fact that unclean and unsanitary means of waste disposal have detrimental effects on sustainable development. On the other hand, Bartram and Cairncross (2010) reveal that unclean water and lack of sanitation have detrimental effects on the people’s health. They cause more deaths in underdeveloped and poor countries of Africa, Asia and East Europe through water borne disease outbreaks such as typhoid, cholera and cryptosporidiosis.

- The water and sanitation problem in Nigeria

The challenges of access to drinking water and proper sanitation in Africa affect even the bigger and developing countries, such as Nigeria and South Africa. Ademiluyi and Odugbesan (2008) state that even though water is one of the precious gifts to mankind, the lack of access to safe drinking water affects millions of people in the poorest rural and peri-urban areas of Nigeria. Inadequacies in water supply and sanitation infrastructure pose serious health and socio-economic problems. Their study revealed three major components of the water and sanitation problems in Nigeria as:

- a) Distant sources for water supply which has much expenditure of time and energy especially on women. It also causes low level of water consumption which results with water-washed diseases;
- b) Poor excreta disposal caused by lack of safe facilities for disposal of human faeces results with the contamination of soil, surface water and ground water;
- c) Limited wastewater disposal facilities causes' environmental degradation and expose people to fatal waterborne diseases, which take away many lives of children in Nigeria and other parts of the continent.

- Water service provision for the peri-urban in post conflict Angola

Cain and Mulenga (2009) denote a high demand of water and sanitation services in peri-urban Angola, due to a high rate of urbanisation and the rapid growth in urban population. Their study was aimed at developing a better understanding of how to identify and support successful locally driven initiatives to improve water and sanitation provision in urban poor communities.

Persson (2009) notes that many studies have shown that financing and cost recovery are key issues for sustainable water and sanitation schemes. The situation gets more difficult when water and sanitation development are financed through loans which seems to be inappropriate for low-income households, especially the poorest, since they have the least capacity to repay loans. This notion has been supported by Cain and Mulenga (2009) who reveal that getting investment for improving water and sanitation gets to be more difficult for poor countries such as Angola. Their study revealed that relying solely on centralised funds from state budgets to maintain local infrastructure in low-income urban areas in Angola has proved unrealistic. Therefore, the maintenance and development of water infrastructure was achieved through the development of competent, capable, accountable local agencies or utilities that work with community organisations. Costs are recovered through the payment of water sold

at the stand posts by users. These stand posts are managed by Associations of Water Committees.

According to Cain and Mulenga (2009), consultation with beneficiaries indicated that residents want better water supply services and are willing to pay for them, if they know how the money they pay is spent. It has been proven that the partnership between the Angolan government and the implementing Agency, Development Workshop who institutionalise the concept of community management and the accountability of service providers to the consumers improved access to drinking water facilities in Angola. The Development Workshop managed to scale up the water supply and sanitation initiatives in the urban community. The participation of the community in the management of water services proved to work because some associations have managed to invest their own capital in the extension of the network supply, through the construction of new stand posts (Cain & Mulenga, 2009).

Despite the success of the work of the Development Workshop, the Angolan politicians have often argued that basic services should be free of charge, because their populist statement resulted in a lack of funds being available for the maintenance of the existing services. As a result of that, the poor paid more for essential services from the private sector or lost income because of frequent illnesses from the contaminated water. On the other side, an opposition position has been promoted by international financial institutions, favouring privatisation (Cain & Mulenga, 2009). Their assumption advocates for privatisation and they argue that competition will provide accountability and holders of concessions to supply water will compete with each other to bring better services at cheaper prices (Budds & McGranahan, 2003).

- The effect of privatisation on the right to water in Senegal and South Africa

Oloka and Onyango (2006) describe water as a natural resource in limited supply and it is fundamental to life and health, and indispensable to guarantee a dignified human life. They further urge governments to increase their efforts to meet the basic water needs of their people and translate water rights into concrete policies. They have advocated for the obligation that should include surety to make water affordable,

facilitate improved and sustainable access to water, particularly in rural and deprived urban areas.

Their study reveals that there has been rapid growth in the privatisation of essential services in many African countries based on the belief that private sectors can deliver growth and efficiency more effectively than the public sector. According to Sonkita (2006), this supposition has not been borne out by the available evidence. The first African state to privatise its water delivery system was Cote d'Ivoire in 1960. Since then, over 18 major contracts have been awarded by 14 African states including South Africa and Senegal. Majority of these contracts were promoted by the World Bank and the International Monetary Fund (IMF) who made the privatisation of public services or utilities an unavoidable condition for their loans to African states (Bayliss, 2013).

Sonkita (2006) demonstrates through the Senegal and South Africa case studies that the privatisation of water by African states affects the process of 'progress realisation' and may result in the violation of the right to water under the international human rights law. Senegal and South Africa are parties to international human rights, the instrument that implicitly or explicitly guarantees the right to water. This is also against the African Charter on Human and Peoples' rights, which enjoins states parties to take the necessary measures to protect the health of their people. Ukwandu (2009) argues that the African Charter's obligation to protect the health of individuals implies that the state parties must ensure that their people enjoy access to water and sanitation services. This goes in line with the obligations of states in progressive realisation of right to water. States must do everything within their power to protect, respect and fulfil this right to water. Despite all the good intentions and noble initiatives to address the universal access to the water supply and sanitation in Africa, there is little achievement in this regard. For example, the 2009's appraisal report on support to the Southern African Development Community (SADC) regional water and sanitation highlighted the challenges that constrain effective management of water resources as follows:

- Weak legal and regulatory framework;
- Inadequate institutional capacities of national water authorities, and regional or river basin organisations;

- Low level of awareness, education and training with respect to economic, social, environmental and political issues related to water resources development and management;
- Low access to drinking water and adequate sanitation due to lack of/or inadequate infrastructure; poor operation and maintenance (African Water Facility-Appraisal Report, 2009).

Okonkwo (2010) once said, “Africa should realise that Provision for water and sanitation is still an essential gift for mankind, more so that they contribute towards the enhancement of human dignity and economic opportunity by freeing women and children from the drudgery of water carrying and provide more time for them to engage in other important activities”.

2.4 Provision of water and sanitation within the South African context

In South Africa, the issue of providing adequate water and sanitation services for all the people, irrespective of their social class or status cannot be undermined any longer. When the former President of South Africa, Dr Nelson Mandela addressed the 2002 World Summit on Sustainable Development held in Johannesburg, he said, “Among the many things that I learned as president was the centrality of water in the social, political, and economic affairs of the country, the continent and the world” (UN report, 2006).

This is supported by Murthy (2013), who points out that the idea of including water and sanitation as human rights has been an important vehicle for countries around the world to raise attention to the perceived inequities and injustices in access to an important natural resource and to services that have significant public health implications.

South Africa as one of the signatories and party to international human rights and as one of the instruments that implicitly or explicitly guarantees the right to water, has an obligation to live up to in the expectations of the United Nations’ 2010 Covenant on the human right to water and sanitation. It is therefore imperative that the South African government should place the human rights to water and sanitation squarely in the

centre of legislation, policies and regulations to protect the vulnerable and marginalised communities (DWAF, 2003). In providing clarity, De Albuquerque (2014) explains the human right to water as one of the rights held by every individual, regardless of who they are, or where they live, and it safeguards their access to water for personal and domestic uses.

On the other hand, DWAF (2003) further explains that the water rights remain generally conferred to an individual or company through property rights or land rights, which are the rights to access or the use of a water resource. These rights are generally gained through land ownership or through a negotiated agreement with the state or landowner for a variety of water uses which include industry or agriculture.

De Albuquerque (2014) further argues that any person or organisation given the water rights can violate other people's human right to water and sanitation by deprivation, pollution or over-extraction. The above-mentioned assertion prompted the undertaking of this study because many people who are deprived of water and sanitation services in South Africa, including the Ga-Kgapane residents allege that the government and those institutions that should provide the services are directly or indirectly violating their human rights, due to their failure to address the persistent water and sanitation crisis. In addition, Sonkita (2006) demonstrated through the Senegal and South Africa two case studies that the privatisation of water services can affect the process of progress realisation of the universal access to water supply and sanitation services and may actually result in the violation of the right to water under the international human rights law. This happened when private firms turned to raising tariffs to recover costs and settled unpaid bills. Ultimately those who could not afford to pay water bills, particularly the poor and rural residents were technically excluded and deprived of access to water supply and proper sanitation. With regards to the issues of sanitation, the SALGA Concept Paper on National Sanitation Policy Framework in South Africa (2008) had correctly put it that:

“For most people, sanitation is first and foremost an issue of personal dignity, privacy and convenience. In a context of historical discrimination and poverty, sound sanitation amenities have become an important index of development and people's quality of life.

Households with poor sanitation and water services are at risk of contracting infectious diseases”.

In concurring with SALGA’s assertion, the UNICEF Executive Director, Anthony Lake once said, “A special attention on the critical necessity of increasing investment and effort on realising the rights of the most disadvantaged and marginalised groups, who face particular barriers to access safe water and proper sanitation is both moral and strategic imperative in advancing human development” (UNICEF Report, 2014).

The South African government did manage to place the human rights to water and sanitation in the centre of all legislations, policies and regulations in order to protect the vulnerable and marginalised communities (DWAF, 2003). Despite the negative criticisms or perceptions on service delivery, policies and legislative framework of South African Government on water and sanitation have yielded much progress ever since the dawn of democracy, in 1994. The United Nations Development Programme (UNDP) Human Development Report (2006) cited South Africa as one of the few countries that spends less on military budgets than on water and sanitation. By 2005, South Africa had improved its basic water supply access from 59% in 1994 to 83%.

On the contrary, a study conducted by Monashane (2011) in Praktiseer, in the Greater Tubatse Local Municipality in Sekhukhune District shows that access to water and sanitation is still a serious challenge in that part of the Limpopo Province. According to this study, more than 40 people at Praktiseer lost their lives due to the cholera outbreak between 2008 and 2009. These mortality cases were because of a lack of proper water supply and sanitation services which made the residents resort to drinking contaminated water from the Tubatse River. Another study conducted by Letsoalo (2012) in Lenyenye Township under the Greater Tzaneen Local Municipality, shows that despite good government policies around the provision of water, residents experience a serious shortage of water in the area. This problem has a negative impact on the households, businesses, schools, churches, as well as on another service provided by government institutions in that area.

2.4.1 The role of cooperative governance in the provision of WSS

Hoffman (2013) states that, “the Constitution is the main relevant, binding and appropriate framework within which proper service delivery is achievable, through constructively working together in the organisational structures it created. In this way, it is possible to attain the levels of service delivery that it requires to respect, protect, promote and fulfil the rights guaranteed to all in the Bill of Rights”. The new political dispensation in 1994 created a ‘constitutional democracy’ in South Africa. Constitution is regarded as a supreme law in South Africa (RSA, 1996).

It is through the Intergovernmental Relation Framework Act (IGRFA) and the provision of cooperative governance enshrined in the 1996 South African Constitution, that all government spheres in South Africa are expected to work together to fulfil the right to water and sanitation to its people. Algotsson and Murombo (2009) give another example of sections in the Constitution that promote cooperative governance in South Africa:

- Section 154 of the Constitution of the Republic of South Africa compels National and Provincial Governments, through legislative and other measures, to support and strengthen the capacity of municipalities to manage their own affairs, exercise power and perform their functions efficiently;
- On the other side, Section 139 stipulates the duty of the Provincial and National Governments as that of monitoring the local government’s performance. This legislative mandate gives the MEC an opportunity to choose or to resume the responsibility of the municipality, if it is proven that the municipality failed to discharge its obligation as per the Constitution.

The Water Services Act (1997) prescribes the legislative duty of municipalities as that of providing water supply and sanitation as per the national standards and norms. It also gives the executive authority to the Minister responsible for Water and Sanitation powers to support and strengthen the capacity of municipalities to manage their own affairs.

In her study, in the Orange-Senqu River Basin, Meyer (2013) reveals that among other constraints on successful IWRM implementation is, the lack of cooperation and communication among spheres of government.

2.4.2 The role of the National Department of Water and Sanitation (DWS)

According to a report by the Standing Committee on Water Supply and Sanitation (SCOWSAS) (1993), prior to 1994, there was no single government department responsible for water and sanitation in South Africa. The responsibility was fragmented and allocated among municipalities and the then nominally autonomous homelands. In 1992, the SCOWSAS was formed with representation from various political parties, trade unions, Non-Governmental Organisations (NGO's), the Water Research Council, officials from the municipalities and the national government. Its mandate was to initiate and review the national water policy and to develop a set of recommendations to integrate the sector (DWAF, 2006). The then National Department of Water Affairs and Forestry (DWAF) was established after the elections of the democratic government in 1994, to ensure that all the South African people had equitable access to water and sanitation. It was also established to address the backlog for those who had been excluded from the services in the past. The responsibilities of the Water Service Authority (WSA) and the Water Service Provision (WSP) were later devolved to the local government and regional water utilities (Manamela, 2010). The department adopted a status of being a water and sanitation service policy formulator and regulator than providing operational services (DWAF, 2006).

The Department of Water and Sanitation (DWS) is now responsible for policy development, regulation and the oversight of water and sanitation provision throughout the entire country (Manamela, 2010). The 1996 Constitution of South Africa and the Bill of Rights enshrine the basic human right to have access to sufficient water and a safe and healthy environment. The South African government fulfils these rights through the department of Water and Sanitation, and some specific water services related legislations (South Africa Yearbook, 2013/14). Hereunder are some examples of the legislative instruments governing the provision of water and sanitation services in South Africa.

- Constitution

The Constitution of South Africa (1996) contains both the government framework and the Bill of rights which have to do with the provision of water and sanitation in the country. As much as the United Nations has declared water and sanitation as human rights, the democratic South African government had made water and sanitation constitutional matters as they are enshrined in the section of Bill of Rights (Machethe, 2011). To start with, the Bill of rights in the 1996 Constitution of the Republic of South Africa, is a cornerstone of the democracy which affirms the values, human dignity, equality and freedom for everyone who lives in South Africa.

Section 27 of the Constitution states that, everyone has the right to have access to, among other rights, sufficient food and water. It further says the government must take reasonable legislative and other measures to achieve the progressive realisation of these rights. Same as the right to sanitation, Section 24 speaks of everyone's rights to a safe environment which is not harmful to their health or wellbeing. This section further obliges the government to protect the environment for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation.

Mnisi (2011) reveals that even when the Constitution guarantees the human rights to all the people in South Africa, the Bushbuckridge people suffer the fate of the insufficient supply of drinking water and sanitation services. The study cites the contributing factors as poor water and sanitation planning, poor governance, lack of communication, infrastructure fails, poverty and lack of employment. As a result, the local people with money and a better educational background migrate to urban areas looking for better municipal services such as piped water, proper roads and sanitation infrastructures.

- Water Service Act, No 108 of 1997

The Water Service Act, 1997 maintains that everyone has the right to access basic water supply and sanitation services and that the provision of those basic services must be fair and equitable to the members of the public. According to Machethe (2011), it is only in the Water Service Act where a clear distinction between WSA and WSP

were clarified. For example, the WSA has a governance function; it is responsible for water services and it is legally obliged to consult communities in preparing its service plans. On the other hand, WSP has provision functions as it actually provides water services such as distribution and reticulation to the people.

The Water Service Act regulates the relationship between WSA and WSP and requires the relationship to be formalised in a writing contract (DWAF, 2006). This Act gives the executive authority and responsibility to the Minister of Water and Sanitation to support and strengthen the capacity of municipalities to manage their own affairs, exercise their power and to perform their function (South Africa Yearbook, 2013/14). It has created a regulatory framework within which the water services could be provided.

- The National Water Act, No 38 of 1998

Water, like any other resource in South Africa was historically allocated unequally among the people (Mnisi, 2011). Bulk water supply infrastructures were developed for those who live in urban areas. To correct the past inequalities on water distribution and access, the National Water Act, 1998 ensures that water resources are protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for all the people in South Africa. It also stipulates the significance of embracing the guiding principles of water resource management, such as ensuring equity, sustainability and efficiency (DWAF, 2006).

Monashane (2011) cautions on the danger of a lack of proper management of the water resource which resulted in the loss of 40 people's lives due to a cholera outbreak in the Greater Tubatse Local Municipality between 2008 and 2009. These mortality cases were because of lack of proper water supply and sanitation services, which made the residents resort to drinking contaminated water from the Tubatse River.

- The White Paper on Water Supply and Sanitation Policy

According to the White Paper on Water Supply and Sanitation Policy in South Africa, 1996, the basic water supply is defined as 25 litres of water per person per day, within 200 metres of the home and it is of acceptable quality. Basic sanitation service is defined as a ventilated improved pit latrine or equivalent. Machethe (2011) argues that

with such noble intention, a majority of the South African poor people still do not have sufficient water supply and proper sanitation facilities. The Department of Water Affairs has alluded to the fact that South Africa is facing serious challenges regarding the provision of water services in municipalities due to poorly maintained and often ill-equipped infrastructure, general under-pricing of water across the value chain and the deteriorating quality of sanitation services (DWAF, 2006).

- The National Water Resource Strategy

The National Water Resource Strategy sets out the vision and strategic actions for effective water management such as, the security of water supply, environmental degradation and pollution of resources. This strategy seeks to propel towards the achievement of an inclusive sustainable and equitable economy. The strategy also responds to the priorities set by government in the National Development Plan (NDP) and the Nation Water Act imperatives that support sustainable development (DWS, 2015). Meyer (2013) emphasises the significance of Integrated Water Resource Management as the most promising approach for achieving efficient and equitable management of water resources and sustainable development in the midst of water scarcity, an increase in water demand for agriculture, industrial and household's purposes and a decline in the quality of water due to pollution. Despite the glossy picture of what IWRM can achieve, there are some challenges. The report indicates amongst other constraints that there is a lack of cooperation and communication between government spheres; the lack of scientific or technical knowledge; poor sewage management and a lack of financial resources.

This has been supported by the World Water Development Report of 2003 which alluded to the fact that the major water problem is poor management and governance. Water was never enough, what matters most is the efforts to save this limited resource as much as possible (UNESCO, 2003). The afore-mentioned constraints may be common with the causes of challenges of water and sanitation provision in Ga-Kgapane, which may be addressed by the application of the National Water Resource Strategy as outlined in the policy.

- The South African Drinking Water Quality Framework

Hodgson and Manus (2006) argue that access to safe drinking water is a basic human right and it is essential to people's health. The Department of Water and Sanitation initiated the Drinking Water Quality Framework to recognise the importance of safe drinking water to public health. The framework intends to monitor, manage, communicate and regulate drinking water quality (DWAF, 1996). Hodgson and Manus (2006) describe water quality as the physical, chemical, biological and aesthetic properties of water which determine its fitness for a variety of uses and for protecting health and the integrity of aquatic ecosystems. Very important on the matter is that government, through the DWS, encourages all stakeholders concerned with the quality of water resources to strive to maintain the quality of water sources within the 'no effect range' (DWAF, 1996).

To manage water quality and waste water, the South African government introduced the incentive-based regulation system aimed to improve the quality of municipal drinking water quality and management of waste water. Each and every year, the DWS conducts an assessment of the Blue Drop and Green Drop to guarantee that the quality of drinking water and waste water systems are managed according to set norms and standards (South African Yearbook, 2014/15).

To achieve the required drinking water quality in South Africa will remain a pipe dream until proper reform is done in the water sector. Van Vuuren (2009) hints on numerous challenges facing the South African Water sector such as increased water deficits, water pollution, and decrease of water quality which impact negatively on human health, ageing infrastructure, severe lack of skilled human resources, illegal use of water and inappropriate use of funds by different role players.

- Free Basic Water Policy

The quest for funding the capital costs of new services infrastructure required the users to cover operation and maintenance costs and it was not affordable. It became clear that the high running costs of water supply deprives the poor and marginalised rural communities of the right to access water and sanitation (Nzimakwe, 2009). The

SAHRC Report (2014) states that the obligation to the right to water in South Africa means that municipalities must take appropriate legislative, administrative, budgetary and other measures to ensure that there is sustainable access to water, particularly to the poor who could not afford. The 2001 Free Basic Policy ensures that the South African households classified as indigent are entitled to 6 000 litres of free water per month.

Farrar (2014) finds the Free Basic Water Policy as one of the most important “pro poor” policies being implemented in South Africa today in order to fulfil the constitutional rights of the poor people. All South African municipalities are allocated a portion of Equitable Share Funds annually to subsidise the free basic water services to poor households.

- National Environmental Management Act, (NEMA) No 107 Of 1998

This Act makes provision for cooperative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that promote cooperative governance, and procedures for coordinating environmental functions exercised by the organs of the state (DWAF, 2003). Monashane (2011) articulates the need for government to take responsibility in ensuring that the environment, in particular the aquatic ecosystems are maintained and remain protected throughout, to ensure that the quality of water remains fit for recognised uses. The author further states that to achieve the above-mentioned, there needs to be an involvement of all the spheres of government, private sector and the civil society. Sesani (2005) points out that since water resources are part and parcel of the natural environment, it is important to implement NEMA to provide for prohibition, restriction and control of activities that are likely to have a detrimental effect on the environment and will subsequently be shortening the lifespan of this very precious resource.

Besides preserving the water resource’s sustainability, Monashane (2011) indicates that contaminated milieu such as natural streams can be fatal to human beings as is the case with the Tubatse Local Municipality.

2.4.3 The role of the Limpopo Provincial Government in the provision of water and sanitation services

The Limpopo Provincial Government works closely with the Department of Water and Sanitation (DWS) to make sure that every person in the province has access to water supply and sanitation services (RSA, 1996). Water and sanitation services are the mandate of the national government under the DWS, which had devolved the functionary services to municipalities under the local government. The Provincial Government acts as an intermediate and coordinates the work of DWS through Provincial Intergovernmental Forums, convened by the Provincial Premier. The Intergovernmental Relations Framework Act (2005) quotes the roles of the Premier's intergovernmental forum as to discuss and consult on matters of mutual interest, which include among others:

- The implementation of national policy and legislation affecting local government interests in the province;
- Matters arising in the President's Co-ordinating Council and other national intergovernmental forums affecting local government interests in the province;
- The implementation of national policy and legislation relating to matters that affect the interests of local government in the province.

The DWS in the province does not derive its mandate and budget from the provincial government but from its national department (DWAF, 2006).

As stipulated in the National Water Policy (1997), the roles and responsibilities of DWS in the province are to monitor the development and implementation of policies; regulate and play oversight on water and sanitation provisions, as well as to manage the water resources. The National Water Act (1998) states that the DWS must ensure that the water resources are protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all the people in the province.

2.4.4 The role of local government in the provision of water and sanitation services

Before the formation of the SCOWSAS in 1992, the national government which was then known as, 'the central government' never had a dedicated department responsible for water and sanitation services. The water and sanitation services were fragmented and allocated among the then municipalities and nominally autonomous homelands (SCOWSAS, 1993). The 1994's newly democratically elected government of South Africa created a new Department of Water Affairs and Forestry (DWAF) to deal with water, sanitation and forestry issues. Within some years, the DWAF transferred the powers and functions of the water supply and sanitation services to the local government sphere. This implied that the districts and local municipalities were given powers to carry out the functions of Water Services Authority (WSA) and Water Services Provider (WSP). The following part of this section will consider the role of local government in the provision of water and sanitation services. It will also touch on some of the key legislative mandates which guide municipalities to respond to the Bill of rights enshrined in the 1996 Constitution of the Republic of South Africa as they provide water and sanitation services to the communities.

The role of local government in the provision of water and sanitation services is purely legislated as it is derived from the 1996 Constitution of the Republic of South Africa. For example, Section 27 of the Constitution states that, everyone has the right to have access to sufficient food and water; and Section 24 guarantees everyone the right to a safe environment which is not harmful to their health or wellbeing. This is the reason why the Water Services Act was enacted to guide municipalities on their roles of ensuring that everyone has the right to access a basic water supply and sanitation services. The Water Services Act further dictates that those mentioned basic services must be provided in a fair and equitable manner to all the people of South Africa, to honour the Constitution's Bill of Rights.

The Municipal Structures Act provides powers and functions of Water Services Authority to local government spheres, particularly to the district's municipalities, unless where the Ministers have considered other local municipalities with requisites capacities. Municipalities who are WSA should ensure that a water infrastructure is developed, operated and maintained to allow residents to get sufficient water and

proper sanitation services. For example, Section 84 (1) (b) and (d) of the Municipal Structures Act gives the municipalities powers and functions to provide potable water supply systems and domestic waste water and sewage disposal systems to their communities.

On the other hand, the 1997 Water Services Act gives more details on water services such as potable (drinkable) water and sanitation services supplied by municipalities to households and other municipal water users. This Act clarifies the roles of municipalities as Water Services Authorities, Water Services Providers, as well the way in which municipalities should look after the interests of their communities as water services customers (DWAF, 2015).

The National Water Act further explains the basic roles of municipalities which include to protect, use, develop, control, conserve and manage water resources when they supply water to consumers. Most significantly, municipalities should develop a system to deal with how effluent and other waste water should be treated before it is returned to the natural streams. Section 52 of the objects of the Local Government and Section 24 of the Bill of Rights in the Constitution, “everyone has the right to an environment that is not harmful to their health or well-being and to have the environment protected for the benefit of present and future generations” (DWAF,1996). This implies that municipalities should ensure that there is access to safe drinkable water and proper sanitation services to minimise the risk of contracting harmful bacteria.

2.4.5 The role of the Mopani District Municipality as a Water Services Authority (WSA)

According to the 1998 White paper on Local Government, municipalities must be a developmental local government system, committed to work with their citizen, groups and communities to create sustainable ways to meet their social, economic and material needs as well as to improve the quality of their lives. This assertion is at par with the objects of the local government as enshrine in the Constitution of the Republic of South Africa (1996) as follows, Municipalities must:

- Provide democratic and accountable governments for local communities;
- Ensure that provision of services to communities is done in a sustainable manner;

- Promote social and economic development;
- Promote a safe and healthy environment;
- Encourage the involvement of communities and community organisations in the matters of local government.

The Municipal Systems Act (2000) also emphasises that a municipality must give priority to the basic needs of the local community and ensure that residents of a local community have access to at least the minimum level of basic municipal services. Koeble and Siddle (2012) argue that even though the local government has given the massive development task by both the 1996 Constitution and the 1998 White Paper on Local Government, municipalities find it difficult to deliver the expected basic functions that were designated to them.

For example, the constitution of the Republic of South Africa, 1996, Schedule 4B spells out that portable water supply and domestic waste-water, as well as sewerage disposal systems are the responsibilities of the local government. The 1994 Water Service Act was very clear in terms of distinguishing the role of the Water Service Authority (WSA) and Water Service Provision (WSP) between the district and local municipalities as the two-tiers of local government spheres.

Monashane (2011) states that the majority of the existing policies and legislations urge municipalities to implement water and sanitation services as they are the most basic human needs embedded in the Bill of Rights. District municipalities were bestowed together with the Water Service Authorities (WSA) to plan and govern all water service matters in accordance with the national standards and norms (DWAF, 2004). In some instances, the district municipalities devolved the water authority to the locals in order to get efficiency through decentralisation of basic service delivery processes.

In Mopani District Municipality, the WSA still rests with the district, unlike in Waterberg District, where the water authority was devolved to the local municipalities (Mopani IDP, 2015/16). The argument on this matter must not be about WSA or WSP but about discharging expected responsibility to ensure that people get these very important

basic services such as water supply and sanitation. According to the World Water Development Report (2003), key challenges around water and sanitation provision do not lie with insufficient or lack of water, but with poor water management and governance (UNESCO, 2003). Juuti and Maki (2005) argue that proper water management is largely dependent on local political, economic, social, technological, environmental and legislative circumstances.

The South African government has taken a stand that water and sanitation provision should be an outmost priority in basic services because it regards water as 'life' and sanitation as a 'dignity' to its people. It is therefore compelling to those who have been bestowed with responsibilities to provide those services to do so diligently (DWAF, 2004). It is all about the institutional capacity to deliver the expected obligation as per the legislative requirements. Koelble and Siddle (2012) describe institutional capacity at local government as the ability of municipalities to perform appropriate tasks effectively, efficiently and sustainably. Atkinson (2007) in Koelble and Siddle (2012) defined institutional capacity in the local government context as, "the ability to undertake administrative functions and provide services, to respond to citizen demands, to allow for representation of interests and effective political participation, to legislate and implement laws and hold public officials accountable". Section 68 of the Municipal Systems Act states that a municipality must develop its internal capacity to a level that can enable it to perform its functions and exercise its powers in an effective, economic, efficient and sustainable way.

2.4.6 Sectors involvement in Mopani District's water and sanitation services

- Minister and Department of Water and Sanitation

Water is a national asset and the Minister of Water and Sanitation is the custodian and national manager of all water resources in South Africa. The management of water resources in South Africa includes catchment management functions, river systems management, water storage, water abstraction and return-flow management. The department is responsible for the planning and implementation of large water infrastructure development projects such as the construction of dams and inter-basin transfer schemes.

- Department of Water and Sanitation (DWS) in Limpopo Province

The roles and responsibilities of the Provincial DWS are to monitor the development and implementation of policies; regulate and play oversight on water and sanitation provisions as well as to manage the water resources (The National Water Act, 1998). It must ensure that water resources in the Districts and Regions are protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for everyone's benefit.

- Limpopo Province Catchment Management Agency (CMA)

The CMA's main responsibility is to collaborate with local stakeholders such as water users' associations and local communities to manage water resources at the catchment level (The National Water Policy, 1997). The Limpopo Catchment Management Agency coordinates the water catchment management functions in all the regions and districts of the province, including the one in Mopani district Municipality. In Mopani district, the most relevant Water-Users' Association linked to the study is the Politsi Water-Users' Association. These are farm owners between Modjadjiskloof and Tzaneen towns as well as the ones around the vicinity of Makgobaskloof, Politsi and Westfalia Estate.

- Lepelle-Northern Water Board (LNWB)

The Lepelle-Northern Water Board was established in terms of the 1997 Water Services Act, as a national government business enterprise, in line with Schedule 3B of the Public Finance Management Act, 1999 (PFMA). It serves as an intermediary for the bulk distribution of raw and portable water regional water supply schemes in the Mopani District Municipality. The LNWB manages and controls all water resources in the district. It distributes and sells bulk water to the district and local municipalities in the Mopani District Municipality.

- Mopani District Municipality

The Mopani District Municipality was allocated the powers and function in terms of Part B of Schedule 4 of the Constitution of the Republic of South Africa, 1996 to be a WSA. This is in line with Section 83 (3) (c) of the Municipal Structures Act (1998) which

says a district municipality must seek to achieve the integrated, sustainable and equitable social and economic development of its area as a whole by promoting bulk infrastructural development and services of its area. The Mopani District Municipality is also responsible for the function of regional water supply schemes under its area of jurisdiction. It must develop a five-year Water Services Development Plan (WSDP) which is a planning instrument to provide universal access to water service, including the eradication of historical backlogs within its area of jurisdiction (Mopani District IDP, 2015/16).

- Greater Letaba Local Municipality

The Greater Letaba Municipality, like other local municipalities in Mopani was assigned the Water Service Provision status by the district. It was given the responsibility to distribute portable water and to provide sanitation services, as well as the collection of revenue on behalf of the district through the signed Service Level Agreement (GLM IDP, 2015/16).

- Wards 03 and 04 Committees

Ga-Kgapane Township is divided into two wards which include parts of the surrounding villages namely, Ward 03 and Ward 04. The Ward 03 and 04 Committees were elected in terms of the Municipal Structures Act (1998) to represent the local residents in running local government affairs in the Greater Letaba Municipality (Machethe, 2011). The Municipal Systems Act, 2000 Section 17 (4) emphasises that a municipal council must establish one or more advisory committees consisting of people who are not councillors to advise the council on any matter within the council's competence. The Ward Committees must work closely with their respective ward councillors to ensure that service delivery is not limited to water and sanitation and is accessible to all households in their wards. Ward councillors are the chairpersons of the ward committees and are assisted by Proportional Representative (PR) councillors to run the affairs of ward committees (GLM IDP, 2015/16).

2.4.7 Stakeholders participation processes

The 1998 White Paper on Local government encourages municipalities to develop strategies and mechanisms to continuously engage with citizens, business and community groups to participate on matters of local governance. To ensure that the above-mentioned provision is real, Chapter 4 of the Municipal Structures Act (1998) provides for the establishment of ward committees through which the local communities participate in their municipality's local governance service delivery programs. In order to intensify the centrality of the community participation processes in municipal affairs, the South African government has introduced 'Batho Pele Principles' which intend to help improve public service delivery by supporting the transformation of the public service into a citizen-orientated organisation (The Batho Pele Handbook, 2010). GLM IDP (2014/15) indicates that the Office of the Premier (OTP) plays a central role in IGR during the consultative processes of the IDP between the Greater Letaba Municipality, Mopani District Municipality and other government departments, including parastatals.

- Users' service expectations

Section 73 (1) of the Municipal Systems Act, 2000 compels all municipalities to give effect to the provision of the constitution and ensure that all members of the local community have access to at least the minimum level of basic municipal services. The White Paper on Local Government puts it clearly by indicating the citizens' role as consumers and end-users who expect value-for-money, affordable services, courteous and responsive service. Both principles of Batho Pele on Consultation and Setting Service Standards are designed to promote service excellence through consultation with the citizens as end-users and the relevant services and appropriate standards can be determined (Bekker & Hennies, 2009).

- The funding model for WSS in the Mopani District Municipality

The Mopani District Municipal IDP (2016/17) shows that water and sanitation services are financed through the water and sanitation components in the local government equitable share, while capital expenditure on water and sanitation projects are financed through the basic services component of the Municipal Infrastructure Grants

(MIG) and Municipal Water Infrastructure Grants (MWIG). These afore-mentioned funds are allocated to municipalities in terms of the Division of Revenue Act (DoRA). The DoRA is enacted annually and gives effect to Section 214 (1) of the Constitution that provides for the equitable sharing of the revenue nationally. Generally, the funding model for WSS in Mopani District is through MIG, MWIG, Equitable Shares and the Municipality's own revenue as well as subsidies from other spheres of government (Mopani District Municipal IDP, 2016/17). The MWIG aims to assist WSA to provide water services to consumers currently without a basic water supply, particularly those in rural areas, through the facilitation, planning, acceleration and implementation of various projects (DWA, 2012).

With regard to the municipality's own revenue, Kanyoka (2008), reveals that rural households are willing to pay for improved water availability and accessibility. It is therefore possible that part of maintenance on water and sanitation costs can be recovered through the water users' fees, because the study has been done in the Mopani district.

2.4.8 Greater Letaba Municipality as a water Services Provider (WSP)

The Greater Letaba Municipality and the Mopani District Municipality signed a Water Service Provider (WSP) contract in the 2010/11 financial year, which allowed the GLM to undertake the operation and maintenance function of water and sanitation, limited to reticulation network and collection of services revenues on behalf of the MDM. The WSP agreement is not fully implemented and is undergoing reviews to improve the contractual contents. Generally, the state of water supply within the GLM is not acceptable and therefore requires urgent intervention to improve the situation. According to GLM IDP 2016/17, the municipality is unable to provide fresh drinking water in other areas and communities ended up using contaminated water collected from natural streams. The cases of water-borne disease outbreaks have been reported in some parts of the municipality.

According to SATS SA Census (2011), 75% of the municipal residents draw water from less than 200m radius, which is the maximum required walking distance to tap water as per the RDP standards. The picture is not glossy in the provision of sanitation

services. The SATS SA has indicated that 75.5 % of the households within the municipality are either without sanitation facilities or have sub-standard toilets, without ventilation.

- Free basic water and municipal indigent policy

The Greater Letaba Municipality had adopted its indigent policy in line with the National Government Free Basic Services legislation which cover those households who could not afford the service charges. Nzimakwe (2009) emphasizes that to satisfy the provision of the Bill of Rights regarding the provision of water and sanitation as enshrined in the 1996 Constitution, municipalities must take appropriate legislative, administrative, budgetary and other measures to ensure that there is sustainable access to water and sanitation to all the people. Approximately 5 804 indigent municipal households who reside in the proclaimed town and township do not pay for the first 6kl water and for other municipal service charges such as refuse, sewerage and property rates (GLM IDP, 2016/17). This number of impoverished households who benefit in the government Free Basic Services (FBS) includes the Ga-Kgapane residents. Other observation from the same IDP documents is that in GLM, all residents who reside in villages receive unlimited free water supply without considering issues of affordability.

- The provision of water and sanitation services in Ga-Kgapane

The GLM IDP (2014/15) pointed out that Ga-Kgapane is one of the strategic growth points of the municipality, as it plays some significant economic roles in job creation, is highly activate in the Central Business Zones, has various higher order social facilities such as a hospital, police service centre, municipal offices and a host of government department offices. All these require a reliable and sustainable water supply and sanitation services.

To investigate the provision of the water supply and sanitation services in Ga-Kgapane the following critical elements will be looked into:

- The current water availability and demand

According to GLM IDP (2014/15), the Ga-Kgapane Water Supply System receives water from the Politsi Water Treatment Plant, which has a capacity of 5.5 mega litres per day and it is operated by the LNWB. The Politsi Water Treatment Plant (WTP) supplies people who reside in Modjadjiskloof, surrounding farms, Ga-Kgapane and the surrounding villages. This System has to pump water to the Panorama Reservoir which is 4.5 mega litres per day for the Modjadjisloof community and also pump into the Meloding Reservoir which is 6ML/d for the Ga-Kgapane community. All these benefiting areas are currently under-supplied because the main source of water which is the Politsi WTP is insufficient.

This has been supported by the 2014 July Assessment Report that was presented to the Ministerial delegates. It highlighted the challenges faced by Ga-Kgapane water service scheme as:

- Inadequate bulk water supply from Politsi Water Treatment Plant;
- Poor reliability of the supply of drinking water; - Lack of water delivery to areas with reticulation; - Frequent water system failures.

The effort by the MDM to augment the water supply in Ga-kgapane through the provision of boreholes could not bear any fruits due to the turbidity content that is above Class II of SANS 241, which is not suitable for human consumption (GLM IDP, 2014/15).

- Water resource management for Ga-Kgapane Township

The main source of water for the Ga-Kgapane scheme is the Politsi Water Treatment Plant, which is located approximately 5km South-East of Modjadjiskloof within the jurisdiction of the Greater Tzaneen Municipality. This purification plant is managed by the LNWB as per the Department of Water and Sanitation's mandate. It has the capacity of 5.5ML per day and it supplies Modjadjiskloof, surrounding farms, Ga-Kgapane and the surrounding villages. The Politsi WTP is not sufficient to meet the

water demand in those benefiting areas (GLM IDP, 2016/17). The municipality purchases bulk water from Politsi and distributes it to the benefiting areas.

2.4.9 The role of water services sector in Ga-Kgapane Township

- Greater Letaba Municipality

The Greater Letaba Municipality as a water service provider is responsible for the distribution of portable water and sanitation services in Ga-Kgapane according to a contract signed with the MDM in 2010/11. This contract allows the GLM to undertake the operation and maintenance function of water and sanitation, limited to the reticulation network and collection of services revenues on behalf of the MDM (Mopani District Municipal IDP, 2016/17). The GLM is required by law to ensure the minimum standard for basic water supply services, which is 25 litres per day or 6 kilolitres per household within a 200-metre radius from the tap.

- Mopani District Municipality

The Mopani District Municipality as a WSA is responsible for the function of the regional water supply schemes under its area of jurisdiction, including the Ga-Kgapane Water Supply Scheme (Mopani District Municipal IDP, 2016/17). This means that the MDM is responsible for the bulk water supply in Ga-Kgapane and the GLM does the network reticulation to all households, government premises and businesses (Greater Letaba Municipal IDP, 2016/17). This is in line with the Municipal Structures Act (1998) which says a district municipality must seek to achieve the integrated, sustainable and equitable social and economic development of its area as a whole by promoting bulk infrastructural development and services of its area.

- Department of Water and Sanitation (DWS) Limpopo Province

The DWS, through the Lepelle-Northern Water Board is responsible for ensuring that the quality of water resources remains fit for recognised water uses in Ga-Kgapane. The South African Water Quality Guidelines (1996) define water quality as the physical, chemical, biological and aesthetic properties of water which determine its fitness for a variety of uses and for the protection of health (DWAF, 1996).

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter was about the review of other researchers and scholars' work regarding water and sanitation services, internationally, nationally and locally. These studies share with the reader the results of other studies that are closely related to the research topic. They provide a framework for establishing the importance of the study, as well as provide a benchmark for comparing the results of a study with other research findings (Tlhoalele, Nethonzhe & Lutabingwa, 2007). The current chapter will cover the methods and procedures that the researcher used to conduct the study. The methods included the research design, sampling methods, population, data collection methods and data analysis.

3.2 Research methodology

Welman, Kruger and Mitchell (2012) describe a research as a process that involves obtaining scientific knowledge by means of various objective methods and procedures that should not rely on personal feelings or opinions. This simply implies that when a scientific study (research) is conducted, particular method(s) should be adopted to draw a sample, collect information, measure variables and to analyse the collected information.

Research methodology is the procedures and logistic arrangement required to undertake a study. Examples of research methods are qualitative and quantitative. In this case, qualitative and quantitative research methods were used to conduct a study on the provision of water and sanitation services in Ga-Kgapane. This study is a mixed research method because it had incorporated elements of both qualitative and quantitative approaches. Creswell (2014) describes the distinction between qualitative and the quantitative research as defined by the use of words (qualitative) and the numbers (quantitative), as well as using closed-ended questions (quantitative hypotheses) and open-ended questions (qualitative interview questions).

On that basis, the following aspects of methodology will be discussed and clarified for this study: Research design, area of study, population of the study, sample size and sampling methods, data collection as well as analysis methods.

3.3 Research design

Kumar (2014) describes the research design as a road map that guides the researcher to find answers to the research questions as validly, objectively, accurately and as economically as possible. McMillan and Schumacher (2001) describe the research design as the procedure for conducting the study, including when, from whom, and under what conditions the data will be obtained. This is a mixed method study, adopting a convergent parallel mixed design because both qualitative and quantitative methods were used to conduct a research on the provision of water and sanitation services in Ga-Kgapane.

A convergent parallel mixed method was used to collect data through semi-structured interviews (qualitative method) with managers, and questionnaires (quantitative method) were used for members of the community in Ga-Kgapane Township's Wards 03 and 04. This fits well with Creswell (2014) who describes a convergent mixed method as one of types of research design in which qualitative and quantitative data are collected in parallel, analysed separately and then merged for interpretation. Creswell (2014) further elaborates that in a convergent parallel mixed method, quantitative data used to test the theory that predicts that independent variables will positively or negatively influence the study, whereas the qualitative data explored the central phenomenon for participants at the site.

During the study on the provisioning of water and sanitation services in Ga-Kgapane, the researcher began with a broader community survey (quantitative) and secondly focused on open-ended interviews to collect detailed views from participants to help explain the initial quantitative survey.

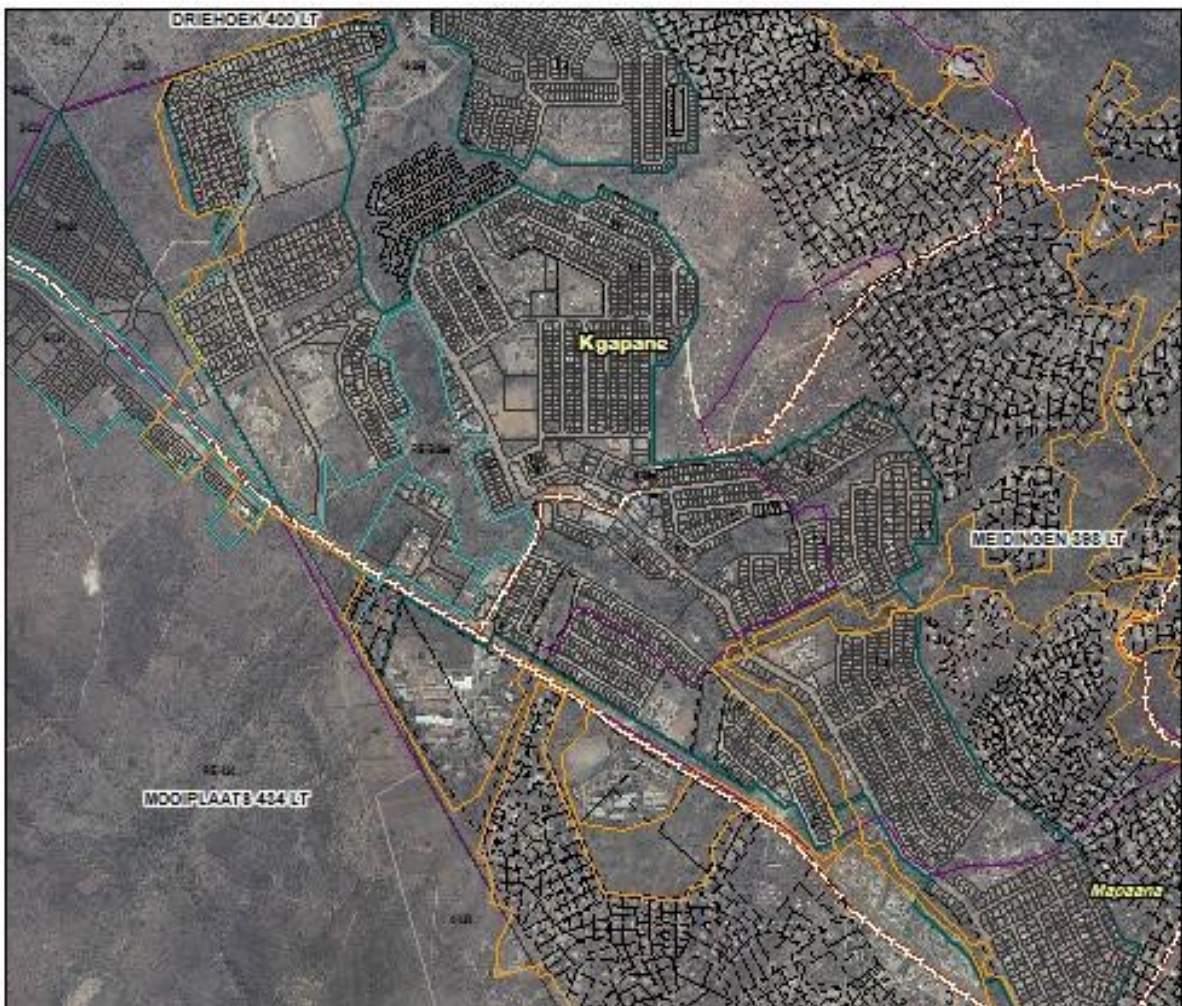
In terms of interviews, the researcher used semi-structured interviews with the managers of the institutions involved in the provision of water and sanitation services

in Ga-Kgapane to probe and understand the crisis much better. Laforest (2009) reveals that semi-structured interviews allow the participants to elaborate on their experiences in their own words while giving some structure of the interview.

3.4 Study area

The study was conducted in Ga-Kgapane Township under the Greater Letaba Municipality, in the Mopani District Municipality in the Limpopo Province. The Township was established in the early sixties with only four sections. Now it has approximately 10 000 people in 14 sections (STATS SA, 2011).

A map of Ga-Kgapane Township



Source: GLM Township Planning Document

3.5 Population of the study

Babbie and Mouton (2011) define population as a collection of objects, events or individuals having some common characteristics that the researcher is interested in studying. Monashane (2011) also describes population as a set of people or entities to which research findings are to be generalised. The STATS SA (2011) indicated that there are approximately 10 000 people in Ga-Kgapane Township, who are affected by the challenges of the provision of water and sanitation services.

3.6 Sample, sampling methods and sample size

The interviewees in this study were purposively selected because they are relatively knowledgeable about the subject to be investigated. They are the ones who are best placed to provide sufficient and relevant information on the provision of water and sanitation in Ga-Kgapane. All these were supported by Welman, Kruger and Mitchell (2012) who states that when research is conducted to investigate a research hypothesis or research question, data is collected from the objects of inquiry in order to solve the problem.

Purposive sampling was utilised to select participants. Kumar (2014) states that the primary consideration in purposive sampling is to choose people who are likely to have the required information and are willing to share it. The sample size comprised of 77 key role players and informants from MDM (Water Service Authority), Lepelle-Northern Water Board (as Implementing Agency), GLM (as a Water Service Provider), and community members (as end-users). The breakdown of the total number of the sample size is as follows: 70 households, 2 managers from MDM, 2 managers from GLM, 2 Ga-Kgapane Township councillors and 1 regional manager from LNWB.

Ultimately, interviews were conducted with the MDM's Municipal Manager and the Director responsible for Water and Sanitation, Ward 03 and 04 Councillors in GLM, Greater Letaba Municipality's Municipal Manager and Director Infrastructure Development and Planning (INDEP) and with the Regional manager of Lepelle Northern Water as a person who is responsible for the provision of bulk water in the

Mopani District. The number of questionnaires distributed randomly among households in the 14 sections/suburbs of Ga-Kgapane to solicit information regarding the provision of water and sanitation were 70 in total.

3.7 Data collection

In this study, a convergent mixed method was used wherein quantitative and qualitative data were collected in parallel through community survey, semi-structured interviews, observations, and documentary data analysis. The collected data were analysed separately and then merged for interpretation. The researcher conducted a community survey using questionnaires (quantitative) and then focused on semi structured interviews (qualitative) as well as observation and documentary data extraction to get detailed views of the participants (Creswell, 2014). Below here find data collection instruments used in the study:

3.7.1 Semi-structured interviews

The aim of the study was to explore ways to resolve and improve the quality of water supply and sanitation services in Ga-Kgapane by informing both policy and practices in terms of how water should be ideally delivered to the residents. Therefore, the data collection method adopted in this study was semi-structured interviews so that the researcher could probe the real root causes of the problem and suggest possible solutions.

The researcher had successful semi-structured interviews with managers of Mopani District Municipality, the Greater Letaba Municipality, Lepelle-Northern Water Board, and the Ward Councillors of both Ward 03 and 04 of Ga-Kgapane Township. The above-mentioned stakeholders are involved in the provision of water and sanitation services in Ga-Kgapane and they have a better understanding of this problem. Kumar (2014) describes interviews as a verbal interchange in which an interviewer tries to elicit information, beliefs or opinion from another person. When conducting semi structured interviews in this study, the researcher realised that respondents were not only providing answers but were also giving reasons for the answers as well. This confirms Laforest's (2009) assertion that semi-structured interviews are one of the

most effective instruments of data collection that are conducted using a fair open framework which allows for focus, conversation and a two-way communication which can be used to give and receive information.

As alluded to in the afore-mentioned statement, the chosen semi-structured interviews assisted because the respondents in this study did not just provide answers, but also gave reasons.

3.7.2 Questionnaires

The other data collection instrument used in this study was questionnaires. Due to a high number of respondents from community members, the researcher used questionnaires to reach sizeable households from all affected sections of Ga-Kgapane Township.

Questionnaires were used to solicit information about the provision of water and sanitation services amongst the Ga-Kgapane community members. The researcher prepared written lists of questions (70 questionnaires) for community members to respond to in writing and they were distributed randomly in all the affected 14 sections of the township. A dedicated team of 14 field workers were deployed to administer the questionnaires. Each field worker administered five questionnaires randomly in one section of the township. One questionnaire was dedicated to one household. Before the field workers' team could start with the administration of the households' questionnaires, they attended two briefing meetings and a mini-workshop was conducted. The purpose of the workshop was to familiarize the field workers with the objectives of the research; how they should administer questionnaires and they were also taught how to conduct themselves as per the requirements of the research ethics.

Before the interviews could commence, the research ethics standards were fully explained by the researcher and respondents were accorded an opportunity to comment and request clarity on any questions. The researcher requested that the participants to provide answers on the questionnaires and they were told that the collected data will be treated with confidentiality and it will be destroyed after the completion of the research.

3.7.3 Documentary data extraction

Documentary data extraction is the collection of data by the researcher or it may have been already gathered by someone or published for a specific purpose (Kanyoka, 2008). Examples of sources of documentary data extraction are among others: Government publications, earlier research documents, personal records and diaries, mass media such as newspapers, internet and magazines (Kumar, 2012).

Along the processes of data collection, the 2014/15, 2015/16, and 2016/17 IDP and budget of both MDM and GLM; LNWB Business plan 2016/17 and 2017/18; Bulk Water Supply Contract signed by MDM and LNWB; Water Services Provider Contract signed by MDM and GLM; Auditor-General's Reports for 2016/17 and 2017/18 for MDM and GLM; Water and Sanitation audited financial statements were collected and reviewed with a hope that they would give some indications of how mandated policies and regulations from national and provincial spheres of government were interpreted and implemented by municipalities. Through the analysis of the above-mentioned documents, the researcher was able to have a deeper understanding of the current situation and what should happen to ideally provide water and sanitation services in Ga-Kgapane. The processes of documents review and analysis reveal how the role-players comprehend or misconstrue the legislations, policies and regulations in the provision of water and sanitation services in Ga-Kgapane.

3.7.4 Observation

Observation is defined as a purposeful, systematic and selective way of watching and listening to an interaction or phenomena as it takes place (Kumar, 2012). Observation is another way of collecting primary data. The researcher realised that both GLM managers are relatively new in the municipality and they did not give full or accurate information on the study matter because they seemed to be unaware of the situations in inquiry. After the interviews, some of the critical areas and the affected projects reported by the media and ward councillors were visited for observation purposes. For example, the Politsi Water Treatment Plant, Mzimhlophe Waste Water Spillage, Mannenburg and Mannenburg Extension sewerage pipe bursts and sewerage manholes overflows were visited.

The researcher decided to visit the above-mentioned areas in order to have a direct interaction with the environment through observation to investigate how it happens, so that the possible solutions could be pursued. Media reported widely about the contamination of the natural streams around the Ga-Kgapane sewerage spillages. The Department of Water and Sanitation under the Faculty of Agricultural Sciences in the University of Limpopo recorded a video of a contaminated river in Ga-Kgapane to highlight the plight. The problems were not yet resolved when these critical areas were visited by the researcher. The data that was gathered from the observations assisted in verifying the data collected during the interviews. During sites visit and observations, some residents appeared not be satisfied with municipal services, saying some of these sewerage blockages were reported some years back and they have not been resolved as they are recurring. The collected data was validated through triangulation of data. Below are some site visit pictures

Figure 3.1: Picture showing open sewage pipe flow in front of the house



Source: Picture taken during a site visit at Mannenburg Section

Figure 3.2: Picture showing open sewage pipe flushing waste in the yard



Source: Picture taken during site visit at Mannenburg Extension Section

3.8 Data analysis

Since this study is a mixed method in nature, quantitative and qualitative methodologies of data analysis and interpretation were employed. Each method's data was collected in parallel and organised into conceptual categories and themes (such as stakeholder's profile and staff profile) analysed separately, and then merged for detailed interpretation. The researcher collected quantitative data and qualitative data in parallel, analysed them separately, compared their results to ultimately assist in drawing the final interpretation to understand the variables (quantitative) and the phenomenon (qualitative).

The quantitative statistics and qualitative coding and thematic analysis were done separately. The qualitative codes or themes were grouped together and analysed to confirm or disconfirmed the quantitative statistics results.

3.9 Ethical considerations

According to Creswell (2003), ethics deal with what is right or wrong, proper or improper, good or bad, and they play a very important role in the research studies. For

this study to be credible, the researcher has considered the ethical responsibilities that accompany the collection and reporting of information (Brynard & Hanekom, 1997). For an example, the following ethics were taken into considerations during the study:

3.9.1 Permission to conduct the study

The researcher sought permission from the institutions and later from the individual officials employed by those institutions before conducting the study. For example, permission was sought from the Mopani District Municipality (MDM), Greater Letaba Municipality (GLM), Lepelle Northern Waters, GLM Ward 03 and 04 Councillors, Ward Committee Members, community members and from the Department of Water Affairs. The participant institutions were requested to give a written consent before they could take part in the research.

3.9.2 Informed consent

The researcher informed the participants about the study's nature and purpose. The participants were requested to sign a written consent form before they participated in the study. The researcher further informed the participants that their participation was voluntary.

3.9.3 Privacy, anonymity and confidentiality

The researcher made sure that anonymity and confidentiality are well maintained during the study. The participants' information was not linked to their names; instead the researcher used 'pseudo' names, especially for those who wanted to remain anonymous. Any recorded information (audio or video) and notes taken during the interaction with the participants was withheld for confidentiality and only accessed by the supervisor and researcher. All the data collected in this research will be disposed after the conclusion of the research processes. All the instruments used in this research will be destroyed and information will be totally wiped out.

3.9.4 Respect for persons

During the entire study period, dignity and integrity of the participants was ensured.

Participants were informed about the research's objectives and how the outcomes of the study were going to assist in improving water and sanitation provision. All the participants were requested to sign a consent form before they could take part in the research. The participants were told that the information they provided will not be accessed by any third party as it will be destroyed and burnt after the conclusion of the research processes.

3.10 Validity and reliability of the study

Mnisi (2011) describes validity as the ability of a research instrument to demonstrate that it is finding out what it designed to achieve, while Xabendlini (2010) explains that reliability is the consistency in the research findings when used repeatedly. To test data collection instruments for the validity and reliability, interview guides were developed and sent to the University of Limpopo's Research Ethics Committee as part of a requisite package for study ethics approval before they were used in the study. It was approved, and the committee issued out an approval in the form of a clearance certificate before the study was conducted. On questionnaires, all 70 households were asked the same questions and their responses were similar. See Chapter four on the presentation, analysis and interpretation of collected data.

The semi-structured interviews have some similar structured questions added by the additional questions propelled by the interviewees responses which warrant clarities. All the interviewees' responses were similar, but they differed slightly on the stakeholders' mandate and roles on the provision of water and sanitation in Ga-Kgapane. Their responses assisted the researcher to identify the gaps between what should have been done and what is happening currently.

CHAPTER 4: RESULTS, ANALYSIS AND DISCUSSION

4.1 Introduction

After the completion of quantitative data collection through survey or questionnaires, the researcher embarked on the presentation and analysed them separately, and then grouped the qualitative data into manageable themes, patterns and trends, and analysed them to understand the relationships between concepts, constructs or variables, and to see whether there are confirming or disconfirming the initial quantitative statistical results. (Creswell, 2014).

The findings of observations, outcomes of the reviewed documents, responses of the questionnaires, and interviews were analysed and interpreted in this section. Subsequently, these results were compared to the information provided in the literature review to detect whether the existing theoretical frameworks or models are supported or falsified by the newly found interpretation in this study.

4.2 Research findings and analysis

4.2.1 Demographics

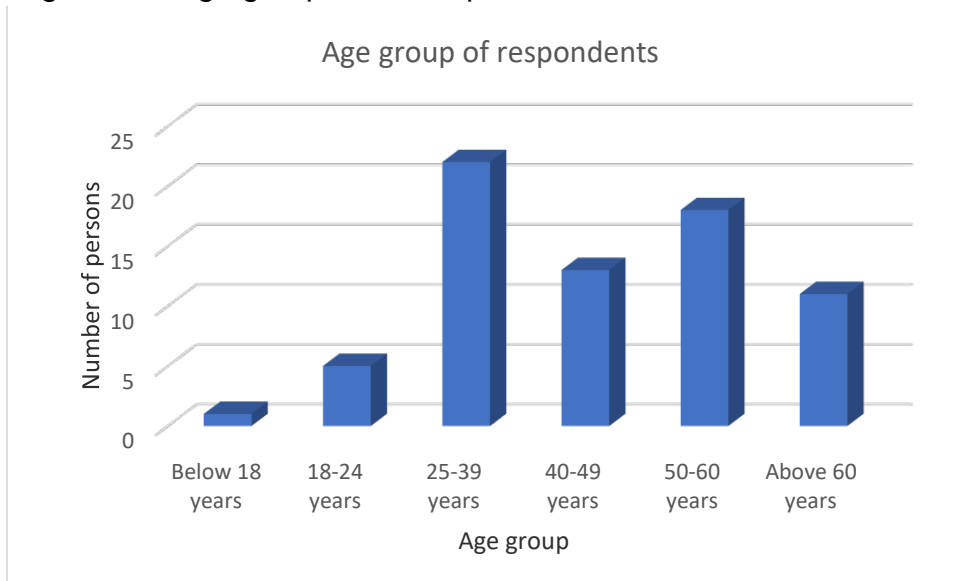
The presentation of findings in this study reflects the demographic and socio-economic characteristics of the respondents at Ga-Kgapane Township. The demographic characteristics include variables such as age, level of education, households' income, gender and employment statistics. The figures, graphs and tables below represent the summary of results on the various variables mentioned above. Below is the age group of respondents who participated on the questionnaire survey undertaken in Ga-Kgapane.

- Respondents per age

Out of 70 respondents, many participants came from the age group of between 25 to 39 years old as they constituted 22 respondents, followed by age group of between 50 and 60-year olds who were made up of 18 respondents. The fourth and the fifth age groups were of 'above 60 years (11 respondents) and 40 to 49 years (13 respondents) respectively. The age group that contributed the least was the 18 to 24 years' group

with 5 respondents, and below 18 years which comprised of one respondent. The reason for the low contributions is because the study was focused on soliciting information from the household owners. In a case whereby the household owner was not present, the elder children in the households were interviewed and this resulted in the discovery of three child-headed families.

Figure 4.1: Age group of the respondents



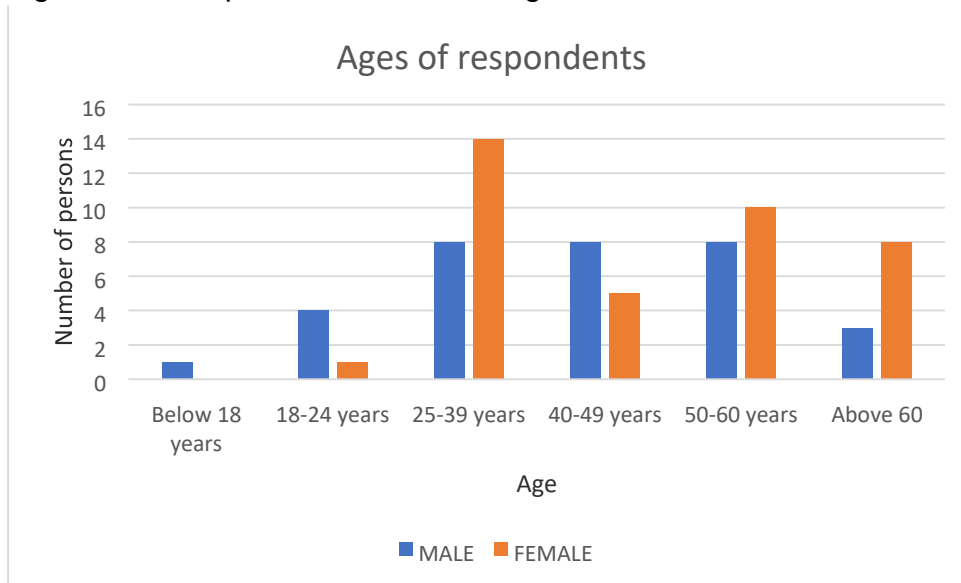
Source: Results from community survey

- Gender

The respondents of this study were dominated by female with a total of 38 participants, as compared to male participants who were 32 in number. Most of the female participants were drawn from the age group of between 25 to 39 years old (represented by 14 females); followed by female respondents who came from the age group of 50 to 60 years (represented by 10 females). The male respondents dominated the age group of between 18 to 24 years, for example: Male had four participants against one woman, and on the 40 to 49 years old age group there were eight males against five women. This study revealed that the majority of females, eighteen (18) who participated were on their exit to pension, while the others were already pensioners; as compared to their male counterparts who were 11 in number.

This indication gives evidence that the majority of householders are predominantly headed by women in Ga-Kgapane. The research findings concur with the outcomes of STATS SA (2011) which indicates that there are 53.9% of women as compared to 46.1% men in Ga-Kgapane Township. On other results, there was no female respondent in the group of below 18 years as there was only one male. On the age group of 18 to 24 years old, there was one female against four males; five females against eight males in the group 40 to 49 years old; and eight females against three in the group of above 60-year olds.

Figure 4.2: Respondents in terms of gender



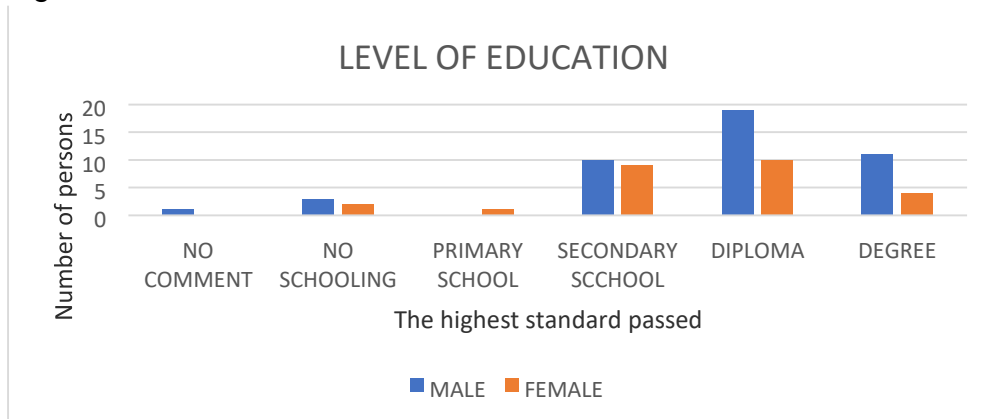
Source: Results from community survey

- Level of education

The results of a community survey through the circulation of questionnaires indicated that the majority of the respondents attended secondary schools, colleges and universities where they have acquired degrees and post degrees. Of these, 19 respondents attended secondary schools; 29 respondents have acquired diploma qualifications, while 15 have obtained degrees and post-degree qualifications. On the other hand, there is indication that there are five respondents who have not gone to school, one respondent who has primary education, and one respondent who did not reveal his educational background.

These findings show that there are literate people around Ga-Kgapane Township whose qualifications range from matric certificates, diplomas, degrees and post degrees. Very few people have no schooling or primary education in Ga-Kgapane as depicted in the below graph. Male respondents seem to dominate in this category of the level of education acquired by participants in this study, there are 34 males as compared to 23 female respondents who have secondary to degree qualifications.

Figure 4.3: Level of education

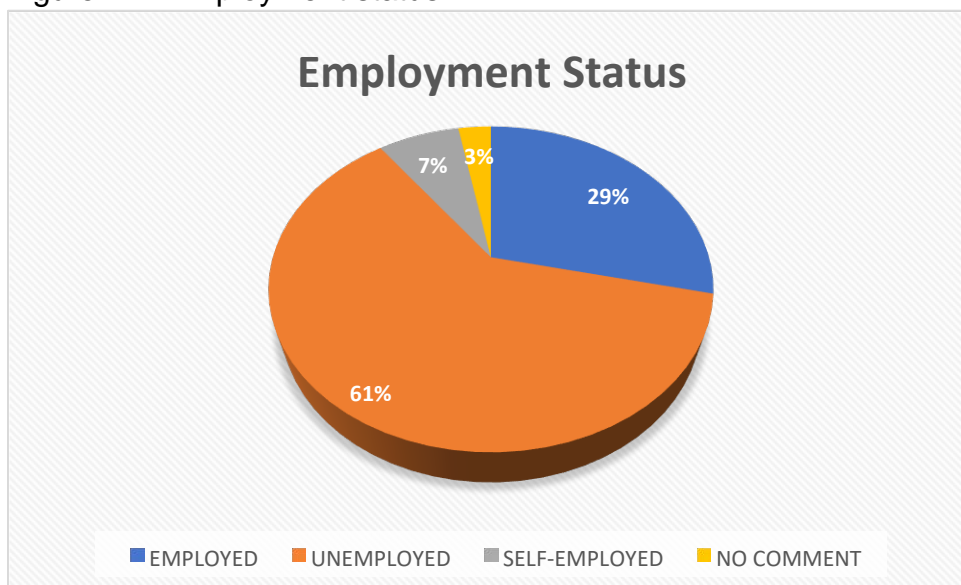


Source: Results from community survey

- Employment status

The study has shown that 43 respondents are unemployed which comprises of 61%; 20 respondents which constitutes 29% are employed in various fields; five of the respondents who made 7% were self-employed; while two respondents opted not to divulge their employment status. The majority of unemployed people are mostly graduates with diplomas and degree qualifications, followed by those who are pensioners. Those who are self-employed are predominately Small, Micro-Medium Enterprises (SMME). For example: four out of five self-employed people fall under SMME. The socio-economic characteristics are very dynamic when coming to the determination of employment status. The level of education does not necessarily determine possibilities of employment opportunities. In this study, some of those who are perceived to have little or no education are employed and earn incomes. There are those who have denied revealing their employment status during the study because they are afraid that the results will make the municipality to force them to pay for services and recover debts.

Figure 4.4: Employment status

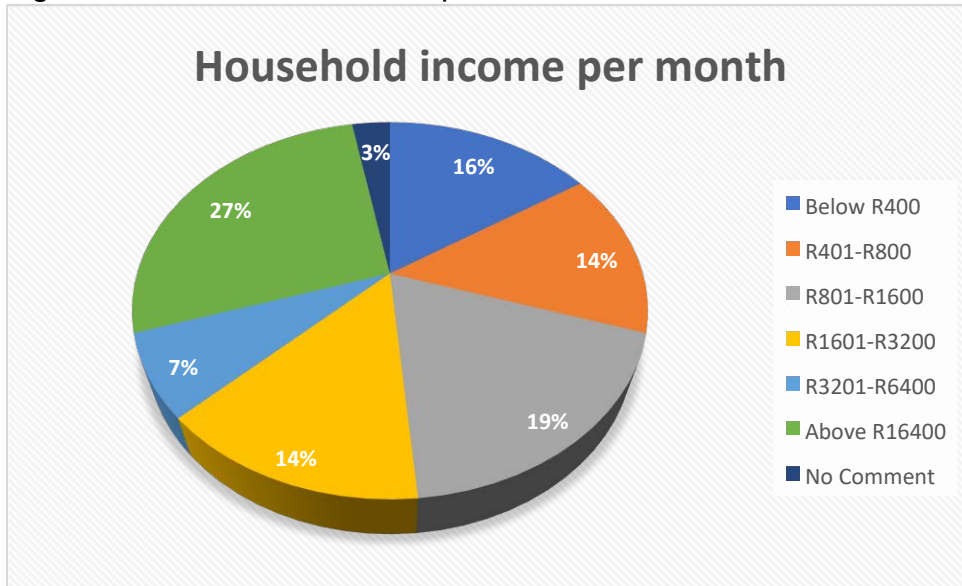


Source: Results from community survey

- Household income per month

The households survey revealed that the highest number of respondents is 19, which constitutes 27% of the people who earn more than R6 400-00 per month; followed by 13 respondents with 19% who earn between R800-00 and R1 601-00. On the third place is 11 respondents with 16% and they earn below R400-00. The fourth place has two groups both with 10 respondents each and constitutes 14% respectively. They earn between R1 601-00 to R3 200-00, and R400-00 and R800-00. On the fifth place is 5 respondents with 7% who earn between R3 201-00 and R6 400-00. Two respondents declined to reveal their households' income on the basis that they owe municipal services. In this study, there is nothing recorded about no-income respondents and credit goes to the government's social security grants programme. Evidence to this, is that the findings on employment status shows that there are 61% unemployment and self-employed is just only 7%, but the households income results indicate that all the households surveyed earn some income.

Figure 4.5: Household income per month



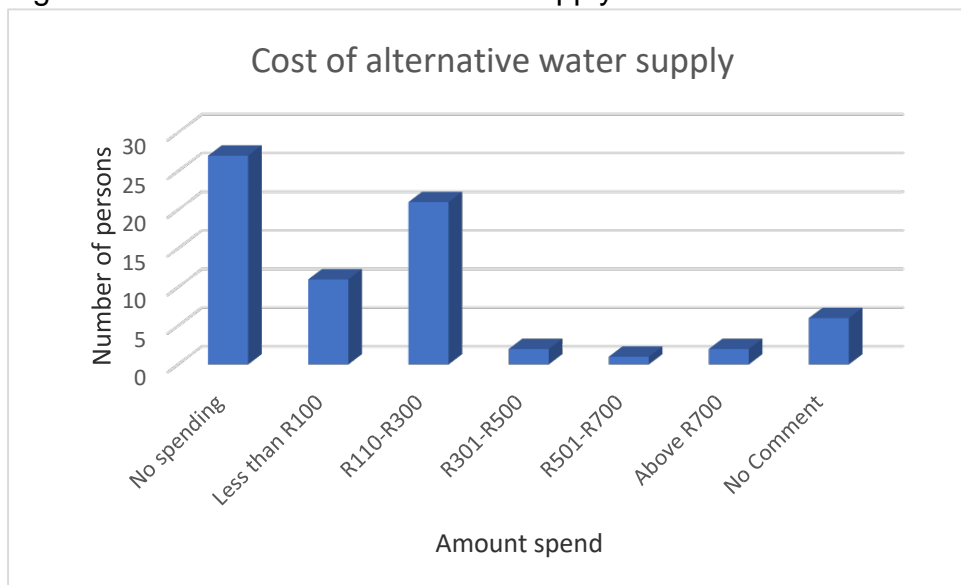
Source: Results from community survey

- Cost of alternative water supply

Insufficient water supply in Ga-Kgapane makes residents seek alternative sources of water supply. The households' survey shows that some of the residents have drilled boreholes in their yards, some have brought water tanks to store more water. The Kgapamadi and Meloding Section residents collect water from natural springs and wells. Some residents have to walk a long distance to fetch water while others hire transport to collect water in the neighbouring villages. The others buy water from those who have boreholes in their yards.

The households' survey shows that 27 respondents get water without incurring any cost. There were 11 respondents who spent less than R100-00; 21 respondents who spent between R110-00 and R300-00 per month to get water; two who spent between R301-00 and R500-00; one spent R501-00 and R700-00; and two respondents who spent more than R700-00 per month to get water. Six respondents did not respond on this question.

Figure 4.6: Cost of alternative water supply

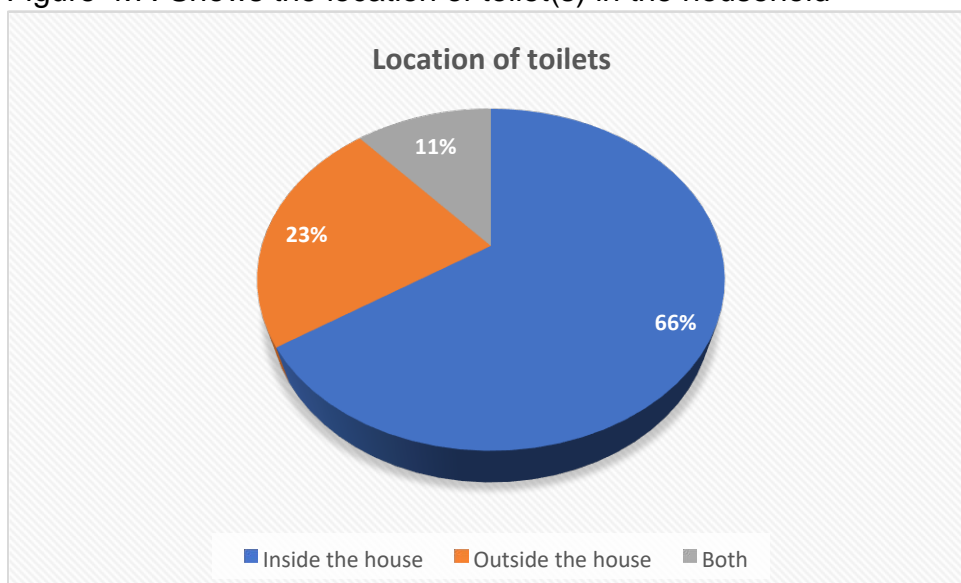


Source: Results from community survey

- Location of toilet in the household

The shortage of water supply in Ga-Kgapane affects the sanitation services negatively. The majority of people who get affected mostly are the ones with toilets inside their houses. The study findings show that 46 households' respondents have indoor toilets; 16 households have outdoor toilets while only 8 respondents have both indoor and outdoor toilets.

Figure 4.7: Shows the location of toilet(s) in the household



Source: Results from community survey

- Water and sanitation infrastructures maintenance

The community survey through the households' questionnaires shows that 52 households respondents alleged that the municipality does not maintain its water and sanitation infrastructures in Ga-Kgapane. Only 10 respondents agree that the municipality does maintenance on its water and sanitation infrastructures while 8 respondents decline to comment on the matter. See the research results on the below table:

Table 4.1: Water and sanitation infrastructure maintenance

YES	NO	No Comment
10	52	8

- Turnaround time to attend and repair pipe bursts

In the study's problem statement, it was indicated that among other challenges faced by the Ga-Kgapane residents, there are continuous sewerage and pipes burst and blockages that flow along streets and others flow into the natural streams and contaminate rivers. In the survey, community members were asked about the turnaround time for the municipality to repair a reported sewerage pipe burst. There were 11 respondents who showed that it takes municipality less than a week to repair bursts; 12 respondents said it takes one to three weeks; ten respondents indicated that it takes a month; seven respondents said it takes two to three months; 19 said it takes more than three months; and one (1) respondent declined to respond on the matter.

Table 4.2: Turnaround time to repair pipe burst

>week	1 – 3 weeks	Month	2 – 3 Months	More than 3 months	No Comment
11	12	10	7	19	1

- Frequency of community meetings

The problem of insufficient water supply and poor sanitation services in Ga-Kgapane seems to be in existence for more than two decades now. The survey conducted, checked with members of community about the frequency of community meetings held recently in Ga-Kgapane. The results showed that five respondents indicated that there no meeting held; four said meetings are convened weekly; ten stated that meetings are held on a monthly basis; 23 respondents said meetings are held quarterly; while 20 respondents said meetings are held half-yearly. Out of the respondents, 8 respondents did not participate on this matter. The research findings show that the lack of community meetings restricts public participation and community involvement in the affairs of the municipality. The fact that councillors failed to convene sufficient community meetings deprived Ga-Kgapane residents' platforms to raise their critical issues regarding water and sanitation services in the township.

Table 4.3: Frequency of community meetings

No meetings	Weekly	Bi-Weekly	Monthly	Quarterly	Half-Yearly	No Comment
5	4	0	10	23	20	8

- Period of the last community meetings held

To verify the frequencies of community meetings in Ga-Kgapane, the survey asked participants to indicate when the last meeting was held in their respective wards or sections. The results show that four respondents said no meeting was held; 14 said 'this month'; 13 said it was two to three month ago; 25 said it was six to twelve months ago; six said last year while eight respondents declined to respond.

Table 4.4: Period of the last community meetings held

No meetings	This month	2 -5 months ago	6 – 12 months ago	Last year	No Comment
4	14	13	25	6	8

- Community expectations

Following up on community meetings, the survey checked with community members if their expectations were met during their meetings with municipality. The results

indicate that 20 respondents show that they are satisfied; 48 respondents seem not to be satisfied; and two respondents show that they are not sure if they are satisfied or not. Those who said they are not sure mentioned the reason that they will just wait and see if what they have been promised (a permanent solution) will happen.

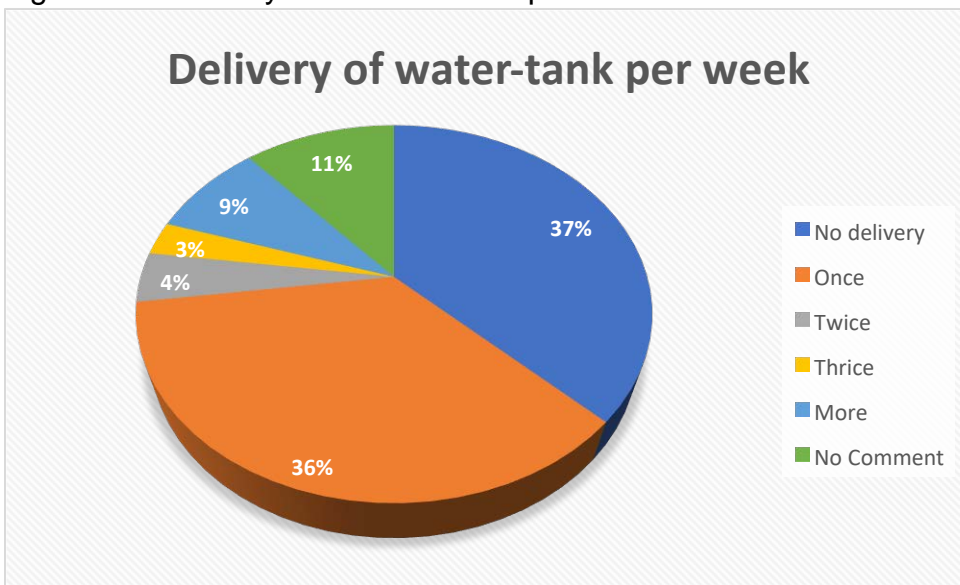
Table 4.5: Community expectations

YES	NO	Not sure
20	48	2

- Frequency of delivery of water tankers per week

As it was alleged in the problem statement of this study that residents of Ga-Kgapane receive water once a week from their taps, the survey went on to check with community members if the municipality is providing water through mobile water tankers in the township. The findings show that 26 respondents indicate that they do not get water from water tankers; 25 respondents get their water supply from tankers once per week; three respondents said twice per week; two respondents said thrice per week; six said more than thrice per week; and eight respondents reserved their comments on the matter

Figure 4.8: Delivery of water-tankers per week



Source: Results from community survey

- Rate of water service quality

The community survey continued to solicit information about the quality of water services in Ga-Kgapane Township. Of the respondents, 28 indicated that the water service quality is very poor; 15 rated it as poor quality; 14 rated it as fair; nine rated it as a good service; two rated it as a very good service; and two respondents reserved their comment on the matter.

Table 4.6: Rate of water service quality

Very poor	Poor	Fair	Good	Very good	No Comment
28	15	14	9	2	2

- Rate your sanitation service quality

Same as water services, the quality of sanitation service was also rated by members of the community during the households' survey. The survey findings were as follows: 30 respondents rated the quality of sanitation services as very poor; 13 rated it as poor; 18 rated it as fair; three rated it as good; four rated it as very good; and two reserved their comment on this matter.

Table 4.7: Rate of sanitation service quality

Very poor	Poor	Fair	Good	Very good	No Comment
30	13	18	3	4	2

- The performance of municipal service delivery

At the same time, the general performance of the municipal service delivery was assessed during the households' survey. Community members were asked if they are satisfied or not regarding the municipal services in their township. The results came with 15 respondents who were satisfied with municipal services; 48 respondents were not satisfied; seven respondents were not sure and four reserved their comments on this matter.

Table 4.8: Assessment of municipal performance on service delivery

Satisfied	Not satisfied	Not sure	No Comment
15	44	7	4

- Frequency of tap water supply per week

It was alleged in the problem statement of this study that residents of Ga-Kgapane Township receive water supply through their houses taps once per week. It was also tested during the community survey to get the real opinions from the research participants. Of the respondents, 46 indicated that in deed they receive water supply through taps once per week, mostly on weekends; 13 respondents showed that they can get water through their taps more than thrice per week. These are residents who reside on the flat areas next to where the bulk pipes pass by, and as a result they get free flow water that needs no pressure boaster. One respondent showed that she receives water twice per week on a tap; and ten (10) respondents declined to comment on the matter citing reasons that they need to get water every day.

Table 4.9: Supply of tap water per week

Once	Twice	Thrice	More	No Comment
46	1	0	13	10

- Payment of municipal services

The community survey also probed if households' owners pay municipal services or not. If they pay, how many can pay and how many are not paying the municipal dues. The results show that only 23 respondents pay for municipal services; 40 respondents did not pay for the services they receive from the municipality. Seven respondents declined to comment on the matter. Among other reasons raised for not paying municipal services was the lack of sufficient water supply and sanitation services in Ga-Kgapane. The findings reveal that the majority of respondents said they would not pay for water services they have not received.

Table 4.10: Payment of municipal services

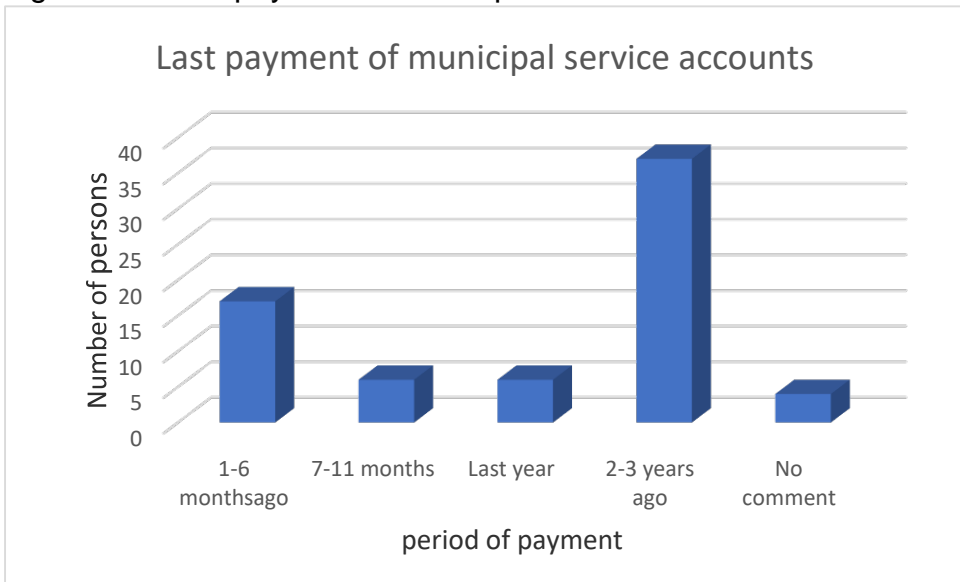
Pay services	Not pay	No Comment

23	40	7
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- The last payment of municipal services by households

The survey also checked with the participants, when last have they paid their municipal services' accounts. The responses received indicate that 17 respondents last paid their municipal service accounts between one to six months back; six paid their accounts seven to eleven months back; six paid their accounts last year; 37 paid their account two to three years ago and four respondents declined to comment on the matter.

Figure 4.9: Last payment of municipal service accounts



Source: Results from community survey

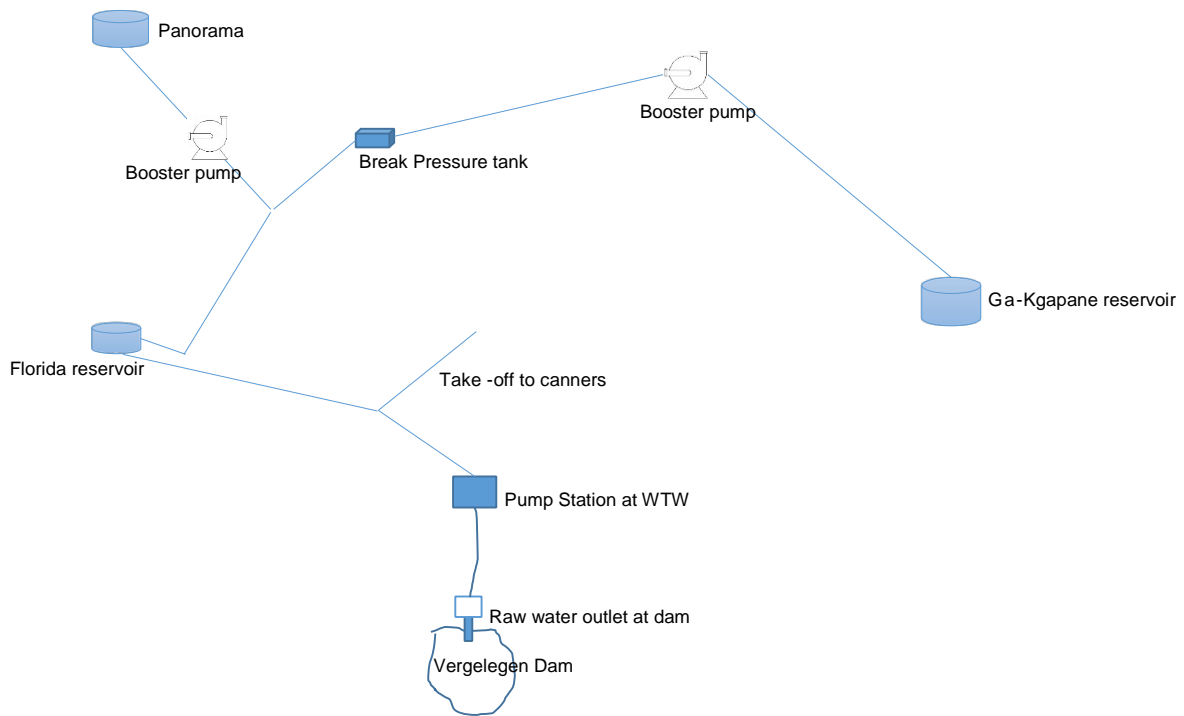
4.3 Challenges of provisioning of water and sanitation services in Ga-Kgapane Township

The problem of provision of water and sanitation services in Ga-Kgapane has been there for so many years, even before the dawn of the democratic dispensation in South Africa in 1994. It had started during the time of Bantustan government, whereby Ga-Kgapane Township was under the former homeland of Lebowa government. During the community survey and interviews done with managers of relevant key stakeholders and institutions; the following were identified as some of challenges leading to a crisis regarding the provision of water and sanitation services in Ga-Kgapane:

4.3.1 Insufficient water supply

Amongst the research findings, it was discovered that Ga-Kgapane had to receive its water supply from the Modjadji Water Treatment Plant, located at Matswi village in the central zone of Bolobedu. There was a dedicated pipeline from Matswi village to supply water to Ga-Kgapane old reservoirs situated at Mandela Park and Mapaana village next to Kgapamadi section. This pipeline passes through so many villages before it reaches reservoirs at Ga-Kgapane. The pipeline was vandalised through illegal connections by residents who reside along the villages that it passes. Many people started to connect illegally from the pipeline to their respective villages and ultimately to their yards. It is alleged that people who reside in the areas where the main bulk pipelines pass to transport water to Ga-Kgapane Township were aggrieved that they do not have water while they saw it passing by every day. This constrained the supply to Ga-Kgapane Township. On the other hand, the Ga-Kgapane population was growing and the township was forced to expand. Subsequently, the Ga-Kgapane Township started to experience insufficient water supplies. Ga-Kgapane Township's water crisis persisted for so many years and residents were suffering. In 1992, the Development Bank of South Africa (DBSA) through the intervention of Ga-Kgapane Civic Association built a reservoir and a pipeline to connect water from Politsi Water Treatment Plant to Ga-Kgapane reservoir.

Figure 4.10: Illustration of pipelines from Politsi to Ga-Kgapane



Source: LNWB Presentation, 02 July 2014

Ga-Kgapane Township started to receive its water supply from the Politsi Water Treatment Plant under the Lepelle-Northern Water Board. From the Politsi Water Treatment Plant, the pipeline to Ga-Kgapane is connected metres away after the take-off connection to Panorama reservoir to supply the township. The allocation of water supply was uneven, the Politsi Water Treatment Plant's Command Reservoir, Florida has a capacity of 5.5ml per day and supplies the Modjadjiskloof CDB with free flow (gravity) water. The remaining amount of water is shared between Modjadjiskloof's Panorama suburb/section and the entire Ga-Kgapane Township. The panorama reservoir has the capacity of 4,5ml per day and Ga-Kgapane reservoir has a capacity of 6ml per day. According to the Lepelle-Northern Water Board, Modjadjiskloof receives 3.5ml per day while Ga-Kgapane gets 2.0ml per day, which is insufficient. It takes a week to fill the 6ml reservoir because not all allocated 2.0ml reaches the reservoir, some of the water flow freely into the pipes of low-lying areas of Ga-kgapane. The research findings during the community survey reveal that some sections around Ga-Kgapane receive water more once per week through water taps.

The research document review and analysis show that the current distribution of water allocations to Modjadjiskloof residents and Ga-Kgapane residents has some contradiction statements from LNWB. For an example: LNWB said it allocates 2ml per day out of 5.5ml per day to Ga-Kgapane reservoir, but the LNWB Business plan 2016/17 indicates that Ga-Kgapane consumes $\pm 70\%$ of water supplied from Politsi plant, while Modjadjiskloof and the Commercial Sector consume $\pm 20\%$ of water supplied from Politsi plant (LNWB Business Plan, 2016/17).

4.3.2 Water policy disjuncture

When it comes to water services in South Africa, the legislation contradicts itself and creates policy disjuncture. For example, the Ga-Kgapane residents do not get equal protection and benefit of the law, when it comes to water and sanitation services as enshrined in the Bill of Rights. Section 27 (b) of the Constitution of the Republic of South Africa, 1996 guaranteed everyone the right to have access to sufficient food and water, but people of Ga-Kgapane do not enjoy the water rights. The Water Services Act empowered the municipalities to provide for the right of access to basic water supply and basic sanitation to their communities and it is not the case with the community of Ga-Kgapane Township.

The research findings expose not only the insufficient water supply and lack of proper sanitation services in Ga-Kgapane Township, but the discovery of huge water supply deficit. Up to now, the Politsi Water Treatment Plants will continue to operate on water supply deficit until the upgrading processes get completed and the newly upgraded water license is implemented. The Politsi command reservoir, Florida has a total capacity of 5.5ml per day and has to supply 6ml per day to Ga-Kgapane reservoir and supplies 4.5ml per day to Modjadjiskloof's panorama reservoir, which is impossible. There is a total of water supply deficit of 5ml per day which amounts to almost 50% shortage of water supply for both Ga-Kgapane and Modjadjiskloof residents hence they lagged in terms of socio-economic development. This has some negative consequences to the whole municipality of Greater Letaba because these areas are two economic hubs and the urban settlements of the municipality.

Ga-Kgapane and Modjadjiskloof are key contributors of municipal revenue. Since the adoption of the country's democratic Constitution, in 1996 and subsequent proclamation of the National Water Act in 1997 and the Water Services Act in 1998, the water supply crisis in Ga-Kgapane remains unresolved. All these very important legislations advocate for the universal access to sufficient water supply and adequate sanitation services for all South African, while the water allocation reforms move on a slow pace to address the imbalance created during apartheid era.

The research findings also discovered that the Politsi Water Treatment's upgrading project had been stalled. The great news of approval of water license upgrade from 5.5ml to 10.5ml per day for Politsi Water Treatment Plant seems to have hit a wall due to dispute lodged by the Agriculture Water-Users' Association around Politsi area. The matter has been referred to the Water Tribunal for a judgement. During the research interviews with managers from MDM and LNWB, it was revealed that the dispute is around dynamics and discourses of water allocation. This confirms what highlighted in the literature review where Movik (2009) cited Mehta (2005) in the UNEP (2006) that the main problem in water allocation is not about water scarcity, but it has to do with social, political and distributional issues.

In South Africa, the above-mentioned issues have been created by policy disjuncture. Movik (2009) further explains that the 1996 South African Constitution recognises access to drinking water as a human right and on the other hand it protects the existing property rights through Section 25 which is known as the 'property clause' in the interests of economic growth. During the apartheid era, black people were excluded regarding access to natural resources such as land and water. Hall (2004) indicates that the main challenge on this matter is that, the previous 1912 Irrigation Act and the 1956 Water Act were both laid on the principle of 'riparianism'. According to DWAF (2004), riparianism means that those who own land adjacent to rivers (riparian land) are entitled to use water 'reasonably'. Water use rights were attached to ownership of the land, which were only entitled to white minority in South Africa (DWAF, 2004).

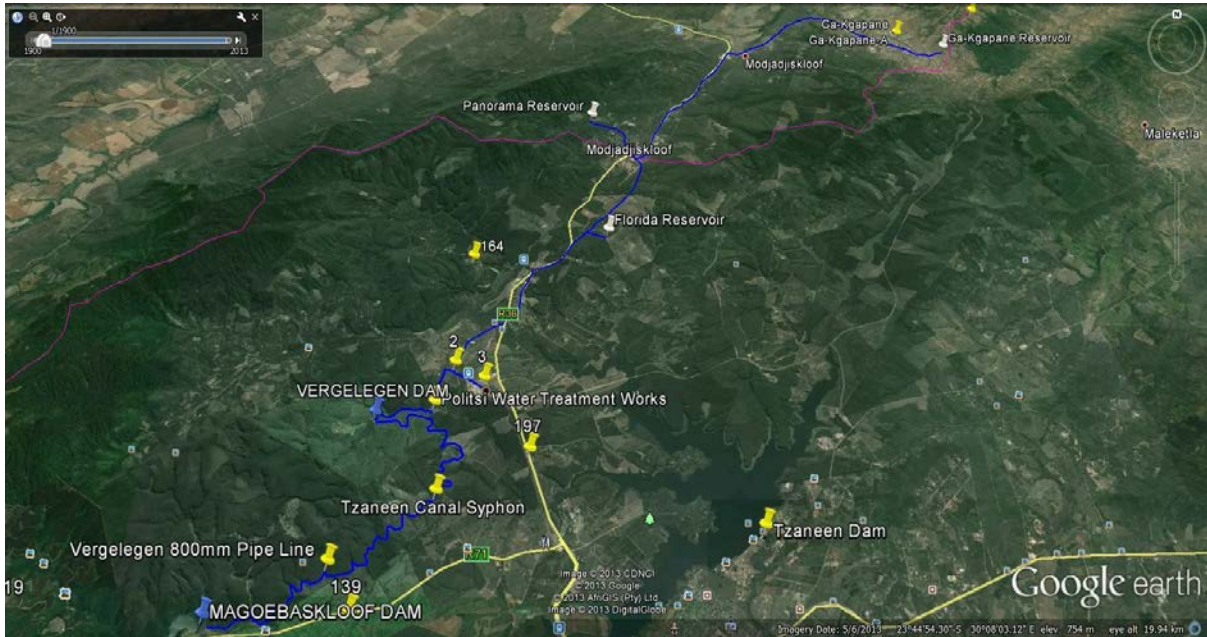
The notorious 1913 Land Act dispossessed black people off land ownership which disqualified them from having water use rights. Black people were relegated to only

reserved areas known as homelands with only 'permission to occupy', the land which was under trusts. The principle of riparianism did not apply in the homelands; only white people were entitled to land ownership and water use rights in South Africa (Hall, 2004). The blacks' homelands combined made of only 13% of the total land of south Africa, while the remaining land was in hands of minority whites.

Section 27 (1) of the National Water Act acknowledges the existing lawful water uses, and on the other hand, promotes equitable access to water for all. Only white communities have water use rights, little has changed to improve on sufficient water supply to former homelands and to black people who reside in townships and rural areas. Evidence to this is the sectoral distribution of water use in South Africa. Agriculture still tops with a distribution of 62 % water use; urban areas have 23% while rural areas have 4%. Unlike former white areas, former black townships are characterised by old poor water infrastructure while the former homeland rural areas depend mostly on boreholes and natural streams for water supply (DWS, 2012).

The above-mentioned situation still exists, in his responses to questions after the 2018 State of the Province Address, the Limpopo Premier, Stanley Mathabatha blamed the lack of water experienced in various communities in the province to the National Water Act (Bulletin Newspaper, 09 March 2018). He said the Act deprives the government of access water resources to supply people with water. He alleges that 60% of dams and rivers in the province are in the hands of a few minority whites.

Figure 4.11: Showing aerial picture of the Makgobaskloof Dam and Politsi WTP



Source: LNWB Presentation, 02 July 2014

- The picture above shows how presently raw water is drawn from the Makgobaskloof dam to Vergelegen River and then to the Politsi plant up to Ga-Kgapane reservoir. The research findings discovered the following current information about bulk supply infrastructure on the scheme:
- Water is drawn through a canal pipeline from Makgobaskloof Dam to Vergelegen Dam;
- The supply pipeline from Vergelegen Dam to Politsi Water Treatment Plant is 350mm diameter (7.8 KM long) is connected from Politsi plant to Florida reservoir, with the capacity of 5.5ml per day;
- Gravity pipeline of 300mm diameter (4.95 KM) connected from Florida reservoir to Panorama reservoir (4.5ml per day) and break pressure tank;
- One 250mm diameter pipeline (21.6 KM) connect from break pressure tank to Ga-Kgapane reservoir, with the capacity of 6ml per day.

To address the issue of insufficient bulk water supply, the LNWB applied for the upgrading of the Politsi Water Treatment Plant, from 5.5ml per day to 10.5ml per day. It took DWS several years to finalise the approval of the upgrade processes. The approval was granted in 2015 to upgrade the Politsi Water Treatment Plant to

10.5ml per day capacity. The challenge is now that farmers as Water-Users' Association around Politsi area refuse the LNWB to extend the pipeline to the water source, Vergelegen Dam. The matter is now at the Water Tribunal for judgement and the project has been stalled. Below is the picture of a New Politsi Water Purification Package Plant with an additional 5.0ml per day capacity to make 10.5ml per day.

Figure 4.12: Showing picture of a New Politsi Water Purification package plant



Source: Photo taken during site visit at Politsi

4.3.3 Old infrastructure

The review and analysis of GLM's IDP documents and LNWB's business plan show that the problem of aged and dilapidated water and sanitation infrastructures contributes hugely on the Ga-Kgapane Township's water crisis. The internal reticulation network infrastructure for water and sanitation is more than 40 years old. Its pipelines consist of asbestos materials, which pose a health hazard to human beings. The township is continuously experiencing pipe bursts and leakages due to

these aged infrastructures. Old asbestos pipes often burst when they feel underground heat and pressure, and they start to leak water or sewerage discharges. The continuous pipe bursts and leakages contribute to the municipal water losses. The municipality experiences unaccounted water losses which impact much the residents and results in fruitless and wasteful expenditure. It was revealed during the study that there are many pipe bursts for both water and sewerage that overflow into the nearby natural streams in Ga-Kgapane Township. The LNWB reports show that old infrastructure contributes to major water losses around Ga-Kgapane as a result of underground pipes' leakages, dripping water from broken meters, toilets and taps.

4.3. 4 Lack of maintenance

The findings show that there is little, or no maintenance done on the water and sanitation infrastructures in Ga-Kgapane. Community surveys indicated that only ten respondents agreed that there is maintenance, while 50 respondents disagreed and said there is no maintenance done in the township. During interviews with two managers from MDM, they acceded that there is no operation and maintenance plan at Ga-Kgapane because they have signed an MOU with the Greater Letaba Municipality. When the other two managers from GLM were interviewed, they said that the MDM did not give them funds for operation and maintenance, and residents are not paying for municipal services in Ga-Kgapane. The GLM further alleged that when they incur expenses on water and sanitation related matters, they do not get reimbursements from the MDM. This finding does not resonate well with United Nations Report (2010) and De Albuquerque (2014) in the literature view, where the two encourage state actors, in this case MDM and GLM to incorporate human rights to water and sanitation in their institutional regulatory and legal framework, into their budgets and service-delivery processes. The MDM and GLM should have agreed on to make provision in their budget for operation and maintenance of water and sanitation infrastructure in Ga-Kgapane and other areas because South Africa is a signatory to UN's declaration of human rights to water and sanitation.

Lack of proper maintenance in Ga-Kgapane aggravates the water and sanitation problems. Currently there are more than ten manhole blockages which overflow into

natural streams around the Modubatse River. The river is full of sewerage water waste discharges, which pose a health threat to both animals and human beings in Ga-Kgapane.

During the site visit at Ga-Kgapane reservoir, it was discovered that there was a huge crack that losses lot of water throughout the day and night. The water is flowing and running through the streets of Meloding Section non-stop. Residents have put in a pipe so that they can be able to draw the water using containers. See the below pictures taken at Ga-kgapane reservoir:

Figure 4.13: Picture show a pipe connected to a crack of a reservoir



Source: A picture takes during site visit at Ga-Kgapane Reservoir

4.3.5 Water loss

The evidence from research findings shows that there are huge water losses due to the lack of maintenance and continuous water pipe bursts. Residents allege that the municipality takes a longer time to attend to a reported pipe burst. In aggregate, community surveys show that 48 respondents agreed that it takes the GLM to repair

reported pipes burst between one week to more than three months. Only 11 respondents reported that it takes the GLM one week to three weeks to repair some reported pipes burst. If one calculates the water loss for that reported period, it is a huge amount of mega litres of water.

Major water losses occur in the older sections of the township such as Mapolankeng, Tshamahansi, Kgapamadi and Losmycherry which use the old-type of sewerage system called 'Long-drop'. This is a semi septic tank sewerage system with a long drop; human faeces are contained in a two-meter pipes before it filled up and flow into waterborne pipes to the main line and subsequently to waste water treatment plant. It needs a lot of water to flush the faeces to the level of the main pipes for the discharge to start flowing to the waste water treatment plant. Besides wasting lots of water, this long-drop system causes a cloud of toxic smell in the township. The Ward 04 Councillor told the researcher that they have done an experiment with the Department of Water and Sanitation officials in Ga-Kgapane to test the consumption of water on a flush of long-drop. It consumed hundred 100 litres of water as compared to the modernised toilet which consumes at least 9 litres per flush. The leaking water taps, and the tripping toilets also contribute to the loss of water in Ga-Kgapane, public taps and toilets are the major culprits on the matter.

Figure 4.14: Picture show non-stop water flow from a pipe at the reservoir



Source: A picture taken during site visit at Ga-Kgapane Reservoir

4.3.6 Non-payment of municipal services

The interview with former the secretary of Ga-Kgapane Civic Association and former Ward Councillor, revealed that Ga-Kgapane Township like any other old established settlement was also engulfed by the 1980's culture of non-payment of services of racial based municipal government. After the intervention by the DBSA, residents of Ga-Kgapane started to pay for services and engagement was ensued with the then Homelands' Local Administration to cut off old debts. The introduction of the democratically elected Pre-Transitional Local Government in 1995 boosted the payments of municipal services in Ga-Kgapane until 2003 when water became scarce. "Residents started to argue that they will not pay for water that they did not receive. Some continued paying while others did not pay for municipal services" (Ramoshaba, 2018). The above-mentioned trend became visible during this research's community survey results: 23 respondents show that they are paying municipal services, while 40

respondents show that they do not pay for municipal services, and seven declined to comment.

Many of the residents who do not pay municipal services said, “they will not pay for services they don’t receive”. They cited reasons such as: lack of water and poor sanitation services in the township. Other respondents even said, why should they pay municipality while they buy water from private people with boreholes or spent money on transport to get water to use in their homes. This had been confirmed by the research findings on the cost of alternative water supply. The respondents have shown that some households spend between R110.00 to more than R700.00 per month to get water in Ga-Kgapane Township, which is even way far more than what they should have paid to the municipality. When the research document review and analysis were conducted, GLM’s IDP document under the caption ‘water supply’ has shown that the problem of inadequate supply of water make some residents to resort in buying water from residents who have private borehole (GLM IDP 2015/16).

During the interviews with the GLM managers, they acceded to the facts that the municipality is unable to provide some of the services due to financial constraints, because residents do not want to pay for the services and the MDM also does not give them money for water and sanitation infrastructure maintenance. When conducting interviews with MDM managers, they blame the GLM for not adhering to the signed MOU. They said that the GLM should deposit the money collected for water and sanitation into a separate district account.

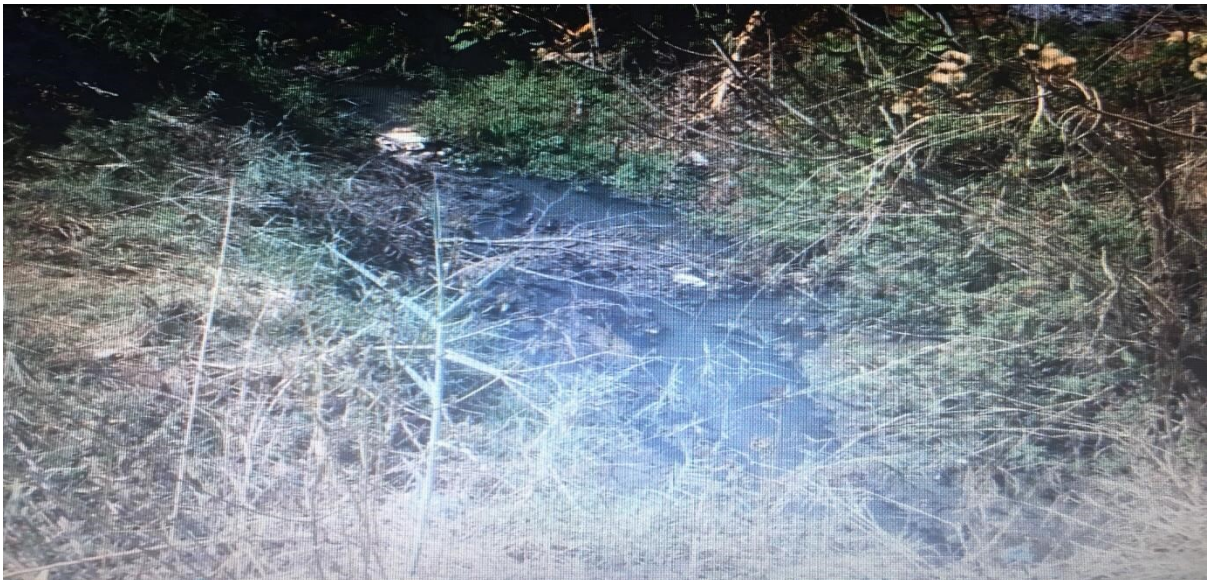
4.3.7 Pollution of natural streams

Pollution of natural streams by sewerage waste water is very serious in Ga-Kgapane. The University of Limpopo has done a sampling study and shot a video of the affected areas in the township. Councillors reported that in 2014, the GLM was warned with a fine of R500 000-00 by the Limpopo Department of Economic Development, Environment and Tourism. This problem features in the problem statement of this research. Sections that are mostly affected are Meloding, Mzimhlophe, Parktown, Extension 7 (Masakhaneng) Mannenburg and the Mannenburg Extension. These areas experienced a high rate of sewage pipes blockages and pipe bursts that led to

sewerage waste water spillage into natural streams. Some of these blockages were attended to many times but they recurred due to the persistent shortage of the water supply.

During the interviews with Ward 03 and 04 Councillors, it was reported that there are almost 21 pipes and manhole blockages which led sewerage waste water to spill into natural streams around the township. The researcher visited and observed some of these spillages at Mannenburg and Mannenbrg Extension. The problems are critical and pose a health hazard to the residents, in particular the affected households (See attached pictures).

Figure 4.15: Image of sewage contaminated water in Modubatse River



Source: Picture from University of Limpopo's video

The biggest river in Ga-Kgapane, Modubatse has now turned into a perennial river because of the continuous flow of sewage waste water. The entire river is flowing green and is always surrounded by ever green vegetation even during the winter season. The containment river poses health threats to the animals and people who depend on it on the other side of the downstream. The pollution of natural streams is against the National Environmental Management Act (NEMA) as alluded to in the literature review section by Monashane (2011) and Sesani (2005) who agreed that natural environment should be protected. The two authors further concur on the fact that the government must prohibits, restricts and control any activity that is likely to

have a detrimental effect on the environment and shorting the lifespan of these precious resources (natural streams).

Figure 4.16: Image showing cattle drinking contaminated water in a river.



Source: Picture from University of Limpopo's video

4.3.8 Institutional capacity

The research findings revealed that there is confusion regarding the monitoring of officials responsible for water and sanitation in the MDM. The MDM manager highlighted that since the devolution of water and sanitation functions to the district municipalities, former DWS employees were not fully integrated into the MDM systems. Their employment status was not timeously incorporated into the MDM 's employee's management systems. For an example, their work and salary progression were not worked on in time. Many of them were no longer with the institution due to retirement, death and resignation, and were not replaced. Some have since changed their positions due to acting capacities or have filled critical vacancies without verification of their skills and qualifications. This has been confirmed by the director responsible for water and sanitation in MDM. He said, "what one can do without

support, the directorate lacks human capital to can effectively discharge their responsibilities. Out of 780 employees transferred by the DWS, only 442 employees left". Interviews with GLM managers show the frustrations the municipality has, with regards to human capital to render water and sanitation services. They said since the signing of the MOU in 2011, their employees who are responsible for water and sanitation decreased and are unable to keep up with the demand of work.

The impression of the GLM managers is that council has no power over water and sanitation services and the officials, because they do not feature in the municipal budget and their staff do not appear in the municipal organogram/departmental structures. The above-mentioned assertion was proven wrong by research findings during the review and analysis of the contract signed by the MDM and GLM on the Water Services Provision agreement. Now that the MDM and GLM have signed a contract, it is official that the district had delegated some of it powers and functions of water services to the GLM. It was further discovered that the way this agreement had been implemented contributed hugely on the undesired audit outcome of both the MDM and GLM for the past three previous financial years of 2015/16, 2016/17 and 2017/18.

4.3.9 Lack of integrated planning

The research findings indicate a sign of no coherent planning among the key stakeholders in the provision of water and sanitation services in Ga-Kgapane. For an example, the intervention in 2014 by the Minister of the Department of Water and Sanitation was done through some Ward 4 community members without proper engagement with the district municipality. This resulted in some of the intervention mechanisms remaining white elephants, without serving their intended purposes. For example, drilled boreholes and pump houses were never operated until they were vandalised by thugs. Water storages were placed at strategic points across the township, but they were never used, and some are getting damaged.

The above-mentioned research findings indicate a gap between stakeholders who participate in the provision of water and sanitation in Ga-Kgapane. There is no coherent planning hence there are no common approaches on the implementation of

strategic intervention on water related issues in Ga-Kgapane. Planning seems to be done in silos, and it is perceived that each role player stays at the corner, plan and concludes without consulting the other. This finding does not go well with the Intergovernmental Relation Framework Act (IGRFA) and the Constitution of the RSA (1996) on promotion of cooperative governance among three spheres as highlighted in the literature review. It has been confirmed through semi-structured interviews with managers from MDM and GLM that what makes the MOU to fail is more on the approaches and expectations from both parties. For an example, during interviews one manager said that “When we do our planning and budgeting in GLM, we don’t include issues related to water and we don’t invite MDM to come and speak on issues of water as a Water Service Authority. I don’t know whether we are right or wrong, but our budget does not have provision for water and sanitation because we are not a WSA”.

The document analysis revealed that indeed there are no items related to water and sanitation services in the GLM’s budget documents for 2015/16; 2016/17 and 2017/18 financial years. This finding indicates another gap between the stakeholders who participate in the provision of water and sanitation in Ga-Kgapane. Some community members in the survey have confirmed that in their community meetings with GLM, water related issues are not discussed, they are just for noting and there are promises that they will be elevated to MDM as a WSA. MDM should have sent officials who work with water and sanitation to be part of GLM public participation’s meeting to assist in clarifying and gathering of inputs. Joint planning does not only encourage coherent planning, but it makes people to see government as one entity unlike to see government of MDM and government of GLM. South Africa is a unitary state with three spheres of government and practices cooperative governance. The same is expected from the local government sphere, between the districts and local municipalities. They should cooperate with one another and do joint planning where necessary, since they serve the same constituencies.

4.3.10 The problem of intergovernmental relations in the provision of water and sanitation services in Ga-Kgapane Township

The problem of water and sanitation services in Ga-Kgapane needs all spheres of government to work together because all of them have certain exclusive roles to play. The Intergovernmental Relation Framework Act (IGRFA) describes intergovernmental relations as the relationships that arise between governments or between organs of state from different governments in the conduct of their affairs.

The study probed how different stakeholders and role players relate to each other in the provision of water and sanitation services in Ga-Kgapane. It was discovered during the interviews with MDM, GLM and LNWB managers that, the relationship among all of them sound cordial but with some strains. The findings show that there is cooperation on certain issues and they do not agree on other issues. The finding amplifies what Meyer (2013) in the literature view revealed, that among other constraints on success of Integrated Water Regional Management is the lack of cooperation and communication among spheres of government.

The MDM complains that the GLM does not conform to the signed MOU, they now renegade on certain obligations, such as paying the district some of the money that was collected but they expect the district to repair and maintain water and sanitation infrastructures. On the other hand, GLM alleges that MDM is not supportive as a Water Service Authority on the funding of operation and maintenance of water and sanitation services. For an example, the GLM pays the purchase of bulk water from LNWB; pays all employees who work on water and sanitation services, including all employees' related expenses and buy water trucks, as well as TLBs without reimbursement.

The LNWB agrees that they have signed the Service Level Agreement with MDM, but the problem is that the district does not keep up to date with the bulk water accounts. LNWB alleges that they supply bulk water in all the district's local municipalities but do not get paid. The MDM responded by saying that the LNWB's billing system is not accurate and the account needs to be reviewed. All the above-mentioned findings contradict with what the Intergovernmental Relations Framework Act stood for. The White Paper on Local Government put forth the following strategic purpose of intergovernmental relations, as:

- To promote and facilitate co-operation decision making;
- To co-ordinate and align priorities, budgets, policies and activities between spheres of government;
- To ensure smooth, effective and accurate flow of information;
- To prevent and resolve intergovernmental conflicts and dispute effectively and efficiently.

The study went further to assess the different roles played by these stakeholders in terms of the provision of Water and Sanitation Services (WSS) in the township. On the positive side of the Intergovernmental Relations Framework Act, the findings have reaffirmed that the National Department through the DWS is the custodian of water resources in South Africa. The Department of Water and Sanitation oversees and regulates the water business through appropriate policies and regulation (DWA, 2013). DWS has appointed the LNWB to be an Implementing Agent on water related issues in the Mopani district. The LNWB as a board owns some of the Water Treatment Plants and sells bulk water to MDM. On the other hand, the LNWB had already signed a 30 years contract with the MDM to run operation and maintenance of its water schemes, for example the Modjadji Water Treatment Plant in GLM, is owned by MDM.

The MDM is a Water Service Authority and it has the responsibility to provide water services to all municipalities in the district. MDM has an obligation to ensure that water and sanitation infrastructures are built, operated and well maintained. It had signed another 30 years contract with LNWB to provide bulk water in the district. The MDM again signed a Memorandum of Understanding with the local municipalities to delegate some of its powers and functions to them to provide water to the people within their local jurisdictions.

Through the signed agreement, the GLM is a Water Service Provider, responsible for water reticulation and sanitation service within its area of jurisdiction, which include Ga-Kgapane Township. The unfortunate part of the study is that Ga-kgapane Township residents still struggle to get sufficient water supply and proper sanitation services. The relationship of all government institutions and parastatals should

translate their contributions into tangible outcomes to achieve government's intention as per the Constitution, National Water Act, and Water Services Act as far as provision of water is concerned.

4.3.11 Lack of proper planning and public participation (community involvement)

The 1996 Constitution of the Republic of South Africa acknowledges that public participation and accountability plays a critical role in ensuring sustainable, democratic and developmental local government (Bekink, 2006). So, it is important for key stakeholders to involve the community in the planning and implementation of programmes and projects related to water and sanitation services in Ga-Kgapane. When the community survey was conducted, many respondents complained about the lack of community consultation and reluctance of councillors to convene community meetings.

The findings of households' questionnaires show that five respondents indicated that no meetings were held, 23 said that meetings were held quarterly (after three months), and 20 respondents said meetings were held after every six months. Ward councillors during the interviews agreed that community members are telling truth and councillors blamed members of ward committees who represented their respective sections for not convening monthly meetings as expected. Councillors also blamed the MDM and GLM officials for bringing in some of water related projects without informing them first, so that they could report to community before projects could start. This has been confirmed by one councillor who said:

“I was called by one of my ward committee members requesting about people whose busy drilling water borehole in the ward. I tried to check with official from our municipality, the official said he knows nothing about drilling of borehole in our ward. I went to the site, I got a contractor who said they have been appointed by the MDM to drill the borehole. I asked them who have shown them where to drill. He answered that they have just decided to come to this spot because it is in the valley”.

Councillors alleged that in most cases, they get information in a short space of time which makes it difficult for them to inform the community members. This trend limits community participation and involvement in matters related to water and sanitation services in the township.

The community survey revealed that the Ga-Kgapane residents felt that they are strategically left out during the planning of water and sanitation services. When the GLM conducts its public participation, issues related to water are just noted without discussion citing reason that they are district mandates. On the other side, MDM always met the representative of IDP forum, not community members themselves. The IDP Representative Forum is the IDP structure whereby the municipality meets all IDP stakeholders to solicit inputs in the drafting of Municipal Integrate Development Programme. The forum is chaired by the Executive Mayor and consists of representatives from sector departments, parastatals, Non-Governmental Organisations, and councillors who represent the community members. During the community survey, residents raised the issue of a social gap between the district and the community. Community members are complaining that councillors do not represent them well on issues of water and sanitation, so they need a platform to raise and discuss those issues. They said water and sanitation issues need time because they top the agenda of the public needs in Ga-Kgapane. They alleged that the councillors have failed them hence the water related problems have not been solved for many years. They claim that government says, 'water is life', while it does not prioritise it. They further allege that the MDM avoids using Ga-Kgapane as a venue for IDP's Public Participation meetings, so that they can get an opportunity to input in the planning of the district, especially on water and sanitation services.

4.3.12 Lack of implementation of government policies

Section 27 of the 1996 Constitution of the Republic of South Africa states that, everyone has the right to have access to among other rights, sufficient food and water. Section 24 of the same Constitution speaks of everyone's rights to a safe environment which is not harmful to their health or wellbeing. The Constitution further says that the government must take reasonable legislative and other measures to achieve the

progressive realisation of these rights. The research findings show that all relevant stakeholders in the provision of water and sanitation in Ga-Kgapane agreed that the Constitution's Section 24 and 27 have been violated.

Firstly, the Ga-Kgapane residents do not get sufficient water and proper sanitation. Secondly, due to inappropriate sanitation services, Ga-Kgapane residents' human rights have been trampled upon. Their surroundings and environment are not safe and pose as a health hazard to their wellbeing. For an example, the natural streams around the township are contaminated with sewerage grey water. The overflowed manholes, continuous sewerage pipes that flow down the streets and the smell that comes from the long drop toilets in the old sections of the township disturb the environment and pose as health risks to residents of Ga-Kgapane.

It was discovered that the Department of water and Sanitation and the MDM have failed on many occasions to live to the expectation of its National Water Act, 1998 and Water Service Act, 1997 to ensure that the residents of Ga-Kgapane's rights to access to sufficient water and basic sanitation services are guaranteed. The GLM had failed to implement the Service Level Agreement it signed with MDM regarding the provision of water and sanitation services in Ga-Kgapane. The GLM also failed to implement its water and sanitation by-laws to prevent irregularities on water uses and sanitation services. The MDM failed on its legal obligations as a Water Service Authority. In all the agreements, the MDM signed with other stakeholders do not exonerate it to abandon its mandate and responsibilities as WSA. As a WSA and as a district municipality, the MDM has constitutional obligations to fulfil in its areas of operation. MDM and GLM failed to adhere and comply with the National Environmental Management Act, when coming to the pollution of natural streams by sewerage waste water spillages. It was alleged that in all the above-mentioned challenges, the department of Water and Sanitation seems not to reprimand the MDM and GLM about the unresolved plight of water provision for Ga-Kgapane residents, as per National Water Act and Water Services Act.

The findings further indicate that the GLM has failed to comply with its internal policies and Municipal Systems Act on public participation and holding of community meetings

to account to the public. The MDM and GLM were unsuccessful in the implementation of their IDPs and Budgets when coming to water and sanitation services in Ga-Kgapane.

When it comes to the provision of water and sanitation services in Ga-Kgapane, both the MDM and GLM have failed the Constitution's Section 152, as reflected below. For example, the MDM and GLM have failed:

- To ensure the provision of basic services of water and sanitation services in a sustainable manner;
- To promote social and economic development in the township;
- To promote a safe and healthy environment;
- To encourage the involvement of communities and community organisations in the matters of local government.

4.3.13 Poor customer relations

The White Paper on Local Government states that the role of citizens as consumers and end-users (customers) who expect value-for-money, affordable services, and courteous and responsive municipal services must be upheld. On the other side, Bekker and Hennies (2009) cite that the Batho Pele principles on Consultation and Setting Service Standards meant to promote service excellence through consultation with the citizens as end-users, and that relevant and appropriate standards must determine the public services. The above-mentioned statements are contrary to the research findings in the provision of water and sanitation in Ga-kgapane. Firstly, it was discovered that consultation with residents on water related services was not done with members of the community. MDM's Executive Mayor convened IDP Rep forum meetings with councillors representing residents of Ga-Kgapane, while councillors hardly held meetings with their constituencies. Issues of monitoring and evaluation of the work of councillors are not given necessary attention.

Secondly, the findings have shown that 44 respondents were not satisfied with the standards of water and sanitation services in Ga-Kgapane. On the other hand, the

findings have shown that respondents were not pleased with the turn-around time of the GLM's officials who respond to the complaints reported, as it has been outlined in the GLM's service charter.

When it comes to water service quality, 28 respondents rated the service very poor, 15 respondents rated it poor, and 14 rated it fair. On the sanitation service quality, 30 respondents rated the service very poor, 13 respondents rated poor, and 18 respondents rated fair. With regards to value-for-money, the community survey indicated that majority of residents in Ga-Kgapane said "they will not pay for services they do not get". This came as a result of insufficient water supply, residents get tap water supply once in a week.

Customer relation is very poor at all levels. The first level is between MDM and LNWB, the latter sells bulk water to the MDM as a client (Water Service Authority). LNWB perceived MDM as a bad payer and it had imposed water restrictions on some of the district's local municipalities, due to non-payment of bulk water account. Secondly, is the relationship between the GLM and the Ga-Kgapane residents. The GLM perceives the Ga-Kgapane residents as bad payers because they have failed to honour their obligations of paying municipal services. On the other hand, the Ga-Kgapane residents perceive the GLM as a poor service provider who has failed to provide basic services such as water and sanitation. That is the reason why some residents withheld payments for municipal services.

4.3.14 Poor monitoring and accountability on issues related to water and sanitation services

Another complaint by the respondents was poor monitoring of the work of officials who render water and sanitation services in Ga-Kgapane. For example; first, they alleged that former employees of the Department of Water and Sanitation responsible for water and waste water treatment's work is not monitored. Secondly, they complained that the GLM employees took the job-cards of reported cases on water related problems but failed to repair or attend to those problems within a stipulated turnaround time according to municipal service charter. That is the reason why other reported matters are even attended after three months, instead of the agreed 48 hours.

If it is burst water pipes, lots of water gets lost; and if it is sewerage, waste water runs through the street or down the natural stream, and it poses health risks.

During interviews, both managers from the MDM and GLM confirmed the abovementioned allegations but indicated that some of them have been addressed. For example, the issue of former department employees was resolved and the outstanding one is on the adequate monitoring which is still a challenge due to the lack of human resources. On water revenue bills, many respondents complained about old meters, and some complained about meter readers. They alleged that despite not getting water every day, their monthly water bills are always high. This makes them doubt the municipal billing systems and think that they are not effective and accurate.

- The effectiveness of systems used for the monitoring work of service providers and municipal officials

The study also checked the effectiveness of systems used by key stakeholders for the monitoring of the work of service providers and municipal officials. The community survey shows that many respondents complained about the lack of monitoring done by municipal officials, as well as the service providers who implement water related projects in the township. They have cited an example of drilled boreholes that were drilled right in open sewerage ponds. They claimed that if the work was monitored by local municipality and its councillors, the location for boreholes should have been changed before drilling could start because the area was already contaminated by old sewerage sludge's. The service provider completed the entire scope of drilling, equipped the borehole, putting pump machine, built pump house, and commissioned an electricity power line to the borehole; got paid but the water failed a test for human consumption, due to high contamination. Government money got wasted and it is a fruitless expenditure.

- Lack of accountability on water related transactions

The research findings revealed that there is no accountability on the water related transactions between the district and local municipalities. Despite the signed MOU between the MDM and GLM, accountability is seldom applied for Annual Financial Statement (AFS) compilation and for legislative compliance. None of the two parties adhered to the signed agreement and this had a negative impact on the MDM audit outcomes. MDM's average audit outcomes range between adverse and disclaimer opinions due to among others, water related transactions with local municipalities, which GLM is part. Research documentary review and analysis revealed that Auditor-General of South Africa's MDM management report of 2015/16 and 2016/17 highlighted the water related transaction between MDM and GLM forms part of the major findings with qualifications.

The research went on to check on how the GLM accounts are done to its council on water related transaction. The findings show that there is no formal accountability on water related transactions. These transactions do not form part of the financial matters that were reported or tabled in the GLM's council sittings and they do not form part of the GLM's budgets. In GLM, water related transactions on revenue and expenditures are not part of the finance reports and reportable matters as required by MFMA. They are just side issues which are left for administration of GLM and MDM to deal, without reporting to GLM council. There is no proper monitoring and accountability on the matter and this is contravention of section 16 of MFMA because the MOU is signed between MDM and GLM to authorise for water related revenue collection by the GLM.

The documents review and analyse findings that have exposed that the local municipalities' water transactions do not feature in MDM's Section 71 and 72 reports, as the MFMA's reports and reportable matters tabled in council. They just feature in the AFS for audit purposes; consolidation and reconciliations of water transactions are just prepared once per year for a legislative compliance.

4.4 The implementation of agreements signed by key stakeholders on water related services

The 1998 National Water Act aims to protect, use, develop, conserve, manage and control water resources, promoting the integrated management of water resources

with the participation of all stakeholders. On the other hand, the 1997 Water Services Act, deals with water services such as portable (drinkable) water and sanitation services supplied by municipalities to households and other municipal water users (DWAF, 2003). The research explored how various stakeholders monitor and account to each other in terms of the agreements signed on water related services, and how these agreements have impact on the provision of water and sanitation services in Ga-Kgapane Township. For examples, agreement signed between:

4.4.1 Agreement between DWS and MDM

While it is the Department of Water and Sanitation's duty to provide the regulatory framework for water services, it is the Water Services Authorities who have the authority to administer water services within their areas of jurisdiction (DWAF, 2006). The regulatory role of the DWS is to ensure that water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all persons. For all the above-mentioned tasks to happen, the DWS has an obligation to oversee and regulate the work of WSA, which is MDM. The 1998 National Water Act dictates that the MDM as a WSA is accountable to the Minister of DWS, as the public trustee of water resources on behalf of the National Government. Since 2002, the local government took over the responsibility of water and sanitation services, while the DWS remained the sector leader, by regulating, monitoring and supporting to ensure effective service provision (DWAF, 2005). It further implies that the department had devolved its role of provision of water and sanitation services to MDM as a Water Services Authority.

On the matter of how the stakeholders implement the agreement signed on the water and services, the research findings discovered that there is no formal signed agreement between DWS and MDM. The agreement is only based on legislative requirements based on Constitutional objects of local government, National Water Act which are supported by other local government legislations such as Municipal Structures Act, Municipal Systems Act, Municipal Finance Management Act, as well as Water Services Act. The DWS issued out Water services regulation to cover all local government policies and laws in terms of provision of water and sanitation

services. The findings revealed that the MDM failed to ensure sufficient water supply and sanitation services in Ga-Kgapane even though the Municipal Structures act gave the district powers and functions necessary to perform the Water Services Authority as outlined in the Water Services Act, 1997.

The MDM has been unsuccessful in public accountability and community involvement in policy formulation and decision-making when it comes to water related issues as enshrined in the Constitution and Municipal Systems Act.

The MDM failed to adequately account on its spending on the water services budget, including its allocated funds for operation and maintenance, water and sanitation's Free Basic Services for indigent households of Ga-Kgapane.

The findings revealed that no money was transferred into the GLM account for water and sanitation services from MDM, even though funds were allocated from the National Treasury in terms of the Division of Revenues Act (DoRA). Both MDM and GLM budgets for the 2015/16, 2016/17 and 2017/18 financial years have shown that there were no funds transferred from the MDM account to the GLM account for water and sanitation services, hence there is no adequate operation and maintenance of water and sanitation infrastructures in Ga-Kgapane. The GLM failed to manage the revenue and debt as well as the water related budget. There was also no reporting about the financial reportable in its municipal council, which is a contravention of the Municipal Finance Management Act.

4.4. 2 Agreement between DWS and LNWB

The 1998 National Water Act, declares that the Minister of DWS as the public trustee of water resources on behalf of the National Government, is responsible for the management of all water resources in South Africa. The Act allows the Minister to delegate most of his or her powers and duties to department officials, water management institutions, advisory committees, and water boards (DWA,1998). Through the National Water Act, the Minister appointed Lepelle-Northern Waters as a water board and implementing agency of water services in the Limpopo Province.

The LNWB accounts to the Minister and is given the roles to provide bulk water supply to municipalities, own, operate and maintain some of the water schemes in the Limpopo province. The DWS allocates funds to the LNWB to run its businesses, while on the other the LNWB perform water services and build water infrastructures on behalf of the DWS. For example: After the MDM failed to implement the Giyani-Nandoni Water Supply Project, the DWS made interventions and requested that the LNWB take over the implementation of the project on its behalf. The research findings indicate that the agreement between the DWS and LNWB is well implemented and that all parties must adhere to what has been agreed upon. LNWB submits its annual business plan to DWS before the financial year starts and its able to account on each activity. The DWS also fulfils its obligations as per agreed contract with the LNWB.

4.4.3 Agreement between MDM and LNWB

The Mopani District Municipality was established in terms of the Municipal Structures Act and it has been bestowed with the responsibility for the provision of water services in its area of jurisdiction, as a Water Services Authority (WSA). To discharge its responsibilities of provision of water services as WSA, the MDM had signed an agreement with the LNWB to supply bulk water in the Mopani region. It was discovered that the MDM signed another agreement of operation and maintenance with LNWB to service some of the district municipality 's water schemes in the region. Unfortunately, the operation and maintenance agreement does not cover Ga-Kgapane Township because the LNWB owns Politsi Water Treatment Plant and has been providing bulk water services to former municipality of Duiwelskloof/Kgapane Transitional Council before the establishment of Greater Letaba Local Municipality.

The research findings confirmed that in 2009, the MDM signed a written agreement with the LNWB to provide bulk water services in the region for a period of 30 years. This contract recognises the executive authority of the MDM to provide water services within its area of jurisdiction; it also formalises and records the current and continued provision of bulk water supply services by the of the Water Board to the municipality in writing in accordance with the 1997 requirements of the Water Services Act. The agreement makes provision for LNWB to render bulk water supply in an efficient, equitable, cost effective and sustainable manner. It also sets out terms that are fair

and equitable to both the MDM and LNWB as per the Model Bulk Water Supply Contract guidelines between a municipality and a Water Board (DWAF, 2006). It was further discovered that despite the insufficient capacity of the Politsi Water Treatment Plant, the LNWB is able:

- To meet its target of 98% of the time provide the water at the required quality standard;
- Monitor the water quality within its water supply networks on monthly basis and inform the municipality of the results;
- To inform the MDM and GLM in writing, at least 10 days in advance, of the planned deviation, reasons, the actions to rectify deviation in accordance with the agreed system operating standards.

Contrary to the above, the MDM failed to honour this agreement in terms of servicing the current account and settlement of the outstanding bulk water supply account, until the GLM intervened and updated its LNWB's account. Even up to date, the GLM's bulk water supply account has been honoured without deviations. This has been confirmed by the LNWB's regional manager during the interviews. The manager indicated that the LNWB has embarked on water restrictions in the MDM areas because of non-payment and this does not affect GLM, as its account is up to date.

4.4.4 Agreement between MDM and GLM

Section 22 of the 1997 Water Services Act stipulates that no person may operate as a water services provider without the approval of the Water Services Authority that has jurisdiction in the area in question. This legislative provision allowed the MDM as a Water Services Authority to get into a signed agreement with GLM to be a Water Services Provider in the entire local municipal area. The findings acknowledge that the agreement between MDM and GLM was initially signed in 2011, modified and signed again in 2016. According to the contract signed in 2016, the MDM amongst others agrees to:

- Appoints the GLM as the exclusive Water Services Provider for the water services in its jurisdiction area;
- Make the water services system available to the WSP (GLM);
- Delegates and assigns to the WSP all powers, duties, rights and obligations capable of being delegated and assigned in terms of the Water Services Act.

The above-mentioned delegated powers, rights and duties to GLM as WSP include:

- Provision of the water services to the consumers within the water services area;
- Collection of the water services revenue;
- Control of the WSP's accounting, financial management and budgeting activities in respect of the water services revenue in accordance with the water services budget;
- Apply and enforce credit control and debt collection bylaws in respect of the water services revenue.

The research findings highlighted the few key agreement clauses that depict the roles that should have been played by both parties, WSA and WSP respectively, but in vain. For example:

- The MDM had appointed the GLM as an exclusive WSP for the water services area, contrary to the research findings.

The research findings discovered that the signed MOU is not clear in explaining the appointment of the GLM as an exclusive Water Services Provider for the water services area, because its employees are only working in the former town and townships, namely in Modjadjiskloof, Mokgoba, Ga-Kgapane and Senwamokgope. This has been confirmed during interviews with both managers who are responsible for water and sanitation services in MDM and the GLM. The rural part of the municipality is not serviced by the GLM employees. It is not clear in terms of who

should service rural areas and how should they be serviced. The findings reveal that the rural areas (villages) are serviced by former department employees who report direct to the MDM than GLM as contrary to the signed contract between the two parties. For example, the signed MOU indicates that the MDM will make the water services system available to the WSP (GLM). The agreement's definition of water services system includes among others the people employed in the division of water and sanitation services in that services area.

On the main, there is confusion that is brought about by interpretations of the two terms 'exclusive WSP' and 'water services area'. The contract only explained the term 'water services area' as the area in which the WSP provides water services on the effective date of the contract, being the geographical areas of GLM, as demarcated on the map attached as Annexure B. The available signed contract between the MDM and GLM does not have annexures as alluded to in the definition of the water services area, but upon inquiry during interviews it was explained that Annexure B should have been the entire municipality's map as per Municipal Demarcation Board, which should cover all the town, townships and the entire villages under the jurisdictions of the municipality.

On the study's focus area, which is Ga-Kgapane Township, the findings show that there were two teams of employees working on water and sanitation services, one reported to the GLM and the other reported to the MDM. It was reported that initially there was confusion in the operations of the two teams before they were incorporated. It was alleged that the water crisis in Ga-Kgapane was worsened by the parallel operations of the two teams. The two teams were not communicating to each other, when the other opened water valves, the other closed them and residents ended up without getting water as per the scheduled times. During interviews with MDM manager, it was reported that the MDM employees were told to work in the villages not in Ga-Kgapane Township and Modjadjiskloof.

- MDM promised to make water services system available to the WSP

The research findings show that this clause was partly honoured by the WSA as the MDM never made water service systems available to the GLM as WSP in an effective manner that assists to resolve water challenges in Ga-Kgapane Township. The availability of water services system should assist the WSP to provide water and sanitation services in line with the expectations of the legislative requirement such as the Constitution, Water Services Act and National Water Act. The water services system comprises of among others; reservoirs, pump houses, boreholes, waste water treatment, purification work, pipelines, staff and vehicles (WSP Contract, 2016). The findings reveal that the above-mentioned water services system is not in a good state to can effectively serve its purposes in the provision of water and sanitation services in Ga-Kgapane because of lack of proper maintenance. For example, a reservoir has a huge crack, pipelines are old and always burst or leak, waste water treatment is not functioning well, no enough water tanker (water trucks) to deliver water to the residents. All these made the GLM to fail to be an effective water service provider in Ga-Kgapane Township.

- GLM must control the WSP's accounting, financial management and budgeting activities in respect of water services revenue in accordance with the water services budget.

The findings agree that the GLM controls the WSP's accounting financial management and budgeting activities, but not in line with the MFMA. The results show that there is no transparency, no adequate internal control over water services revenues, and no proper accountabilities. The GLM water services budget was never tabled in council for the past three financial years, which is a contravention of MFMA. For example, it was discovered that the following financial years: 2014/15, 2015/16 and 2016/17 budgets of GLM were tabled in council without the inclusion of water and sanitation services' budgets.

- The GLM must collect water services revenue

The findings show that little money had been collected through water services revenue. During the community survey many respondents indicated that they do not pay municipal services due to the insufficient water supply in Ga-Kgapane Township. The respondents also complained about poor maintenance of water services infrastructure and the poor customer services they receive from both the MDM and the GLM. Due to the reluctance of some residents to pay municipal services, the collection of revenue becomes insufficient to allow the municipality to render other services to the community. The lack of or insufficient provision of water related services in Ga-Kgapane does not affect only water services revenue, but it affects all the municipal services' revenue. The lack of sufficient water and sanitation services impedes general growth and development in the township, jobs are slowly created, the economy is not growing, unemployment increases, and many households can no longer afford to pay municipal services. Because of the above-mentioned factors, the GLM was no longer able to collect revenue and relied on municipality grants.

- The GLM should apply and enforce WSA's credit control and debt collection bylaws in respect of the water services revenue

Research findings show that insufficient water and sanitation services in Ga-Kgapane failed the GLM and there was an enforcement of the debt collection policy. The GLM cannot apply and enforce by-laws because the MDM, who is WSA did not update its water related policies. It was discovered during interviews with MDM managers that the by-laws were outdated and needed to be reviewed by the WSA. This made the two parties, WSA and WSP to fail to fulfil their credit control and debt collection.

4.5 CONCLUSION

The research findings indicate that the problem of provision of water and sanitation services in Ga-Kgapane Township is more than what has been experienced. The findings reveal that the problem comprises of a number of challenges including among others; a deficit in water supply; water policy disjuncture; old infrastructures; lack of maintenance; huge water losses; non-payment of municipal services; institutional

capacity; lack of integrated planning; ineffective district IGR structures; lack of public participation; pollution of natural streams and non-adherence of agreements signed by key stakeholders. One of the highlights of the findings is the discovery of a case between the LNWB and the Politsi Water Users Association, who oppose the upgrading of the Politsi Water Treatment Plant License.

CHAPTER 5: SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

The aim of the study was to investigate the provision of water and sanitation services in Ga-Kgapane, using the qualitative method and exploratory design. The data collection tools used in this study were semi-structured interviews, questionnaires, documentary review and analysis as well as observations. The previous chapter was about the presentation, analysis and interpretation of the findings of the research. The collected data was organised into manageable themes, analysed and interpreted to understand the relationship between the previous studies and the current study. This chapter is going to reflect on the summary of research findings and it will report on the conclusions of the research in relation to the research questions and provide some recommendations to address critical issues flagged in the problem statement of this study. The other part of this chapter reflects on the limitation of the study and makes recommendation for other future studies.

5.2 Summary of findings

This section of the chapter revisited the objectives of the study to summarise the major findings related to each objective.

Objective 1: To assess how stakeholders through IGR contribute towards the provision of water and sanitation in Ga-Kgapane.

In terms of the above-mentioned objective, the research findings show that the relation among key stakeholders seems to be fine although there are some constraints. Stakeholders are cooperating on certain issues and not agreeing on others. For example, the MDM complains that the GLM does not conform to the MOU signed on WSP, it renegades on its obligation of collecting water related revenue and puts money into a separate bank account. The GLM also makes counter-complains that the MDM fails to make available a budget for operations and maintenance of water and sanitation infrastructure. This shows that the Intergovernmental Relations Framework Act is not followed by the stakeholders who provide water and sanitation services in

Ga-Kgapane Township. The issues raised by both municipalities should have been addressed in their district's IGR meetings. The findings further reveal that the GLM pays for the purchase of bulk water from LNWB; pays for all the employees' related cost under water and sanitation services unit; buys water trucks; other machinery and equipment, without reimbursement from the MDM.

The study also discovered that the relationship between the LNWB and MDM has its own challenges. The LNWB complains that it signed a contract to supply bulk water to the MDM's local municipalities, but the MDM is not paying for the services. The MDM countered by challenging the billing system of LNWB that it is inconsistent and needs to be reviewed. To force the MDM to pay, the LNWB restricted water in all local municipalities under the MDM, except in the GLM because its account is updated. All these contradict the principles of the IGRFA such as fostering good relations all the time and resolving intergovernmental conflicts and disputes effectively and efficiently.

The findings that reflected on the challenge of lack of coherent planning by key stakeholders in the provision of water and sanitation shows that the IGRFA has been overlooked. It was discovered that stakeholders who provide water and sanitation services in Ga-Kgapane do not co-ordinate and align their priorities, budgets, policies and activities as envisaged by the IGRFA. During the interviews with municipal managers of both the MDM and the GLM, it was discovered that the district IGR structures have been formed, but they are not functional.

Objective 2: To evaluate how MDM implements its IDP as a WSA.

To evaluate how the MDM implements its Integrated Development Plan (IDP) was so sketchy and difficult, especially focusing on Ga-Kgapane Township. The research findings show that the township's water and sanitation services were never given the much-needed attention by the MDM in its IDP processes. It was just generalised with other areas of the municipality such as Modjadjiskloof, Senwamokgopo and villages in the GLM. According to the findings, the plight of water and sanitation in Ga-Kgapane started to attract much attention during the community protest march, which subsequently led to the Minister's intervention. In the research interview with managers from the MDM, it was confirmed that Ga-Kgapane Township's water and

sanitation plight was never given much attention in the IDP processes. One manager mentioned that sometimes IDP processes of prioritisation are dominated by influential councillors who mostly push for their own preferential areas without consideration of others' dire needs when coming to water issues.

On the other hand, records of the minutes of the 2014 Ministerial intervention in Ga-Kgapane Township water crisis meetings show that the MDM was rarely represented. This is some of the reasons why other intervention projects by the DWS and LNWB remain white elephant because of little cooperation of the MDM in the processes. For example, the issue of drilled boreholes in the old sewage open ponds and storage tanks put in various strategic spots across Ga-Kgapane Township, but the MDM claims not to be aware of them. The findings further reveal that a little amount of money was put for Ga-Kgapane Township's budget for water and sanitation services, especially on repairs and maintenance for 2015/16; 2016/17 and 2017/18 financial years.

Findings reveal that for the past five years; no MDM's major project was dedicated to Ga-Kgapane Township to deal with problems of water and sanitation services such as the replacement of pipelines or augmentation of water supply as well as ways of addressing natural streams pollution. Even after the DWS and LNWB planned to increase the license for bulk water supply for the Politsi Water Treatment Plant, the MDM and GLM as both the WSA and WSP respectively seem not to have had a plan to address issues that impeded the effective water reticulation in Ga-Kgapane Township. Even if the water supply increases, the water problem and sanitation services in Ga-Kgapane Township will continue.

The research findings show that no major consideration of Ga-Kgapane township's water and sanitation services in the MDM's IDP and budget as WSA, results with negative or little implementation of IDP and budget in the study area. This contravene UN Article 2(1) which obliges all state actors across the world to incorporate human rights to water and sanitation in their institutional regulatory and legal framework, as well as into budgets and services-delivery processes.

Objective 3: To assess the challenges faced by various stakeholders in the provision of water and sanitation in Ga-Kgapane

- Insufficient water supply

The research findings confirm that there is an insufficient supply of water in Ga-Kgapane because the Politsi Water Treatment Plant's command reservoir, Florida has capacity of 5.5ml per day and it must supply Modjadjiskloof CDB with free flow (gravity) water. The remaining amount of water is shared between Ga-Kgapane Township and Panorama suburb/section of Modjadjiskloof. The Ga-Kgapane reservoir has a capacity of 6ml per day and Panorama Reservoir has capacity of 4.5ml per day.

According to Lepelle-Northern Water Board, Modjadjiskloof receives 3.5ml while Ga-Kgapane Township gets 2ml per day, which is insufficient. It takes a week to fill up Ga-Kgapane's 6ml reservoir because not all the allocated 2ml reaches the reservoir, some of the water flows freely into pipes of low-lying areas of Ga-Kgapane. That is the reason why during community survey some respondents said they get water through taps more than once per week. The research findings expose not only insufficient water supply and lack of sanitation services but discovered huge water supply deficit. The fact that the Politsi's command reservoir is 5.5ml and must supply 4.5ml of Panorama and 6ml of Ga-Kgapane create a shortfall of 5ml per day which is almost fifty percent (50%) deficit of water supply.

- Water policy disjuncture

When it comes to water services in South Africa, the legislation contradicts itself and creates a policy disjuncture. For an example, Hall (2004) explains that the South African Constitution, 1996 recognises access to drinking water as a human right and on the other hand protects the existing property rights through section 25 which is known as the 'Property clause' in the interests of economic growth. During apartheid era, black people were excluded regarding access to natural resources such as land and water. Furthermore, the previous 1912 Irrigation Act and the 1956 Water Act were both laid on the principle of 'riparianism'.

During the documentary review and analysis, it was discovered that the DWAF (2004) highlights that riparianism means that those who own land adjacent to rivers (riparian land) were entitled to use water 'reasonable'. The water use rights were attached to the ownership of land and the 1913 Land Act had dispossessed black people land ownership. Furthermore, the principle of riparianism did not apply in the homeland, where black people reside. This prevents black people to own any water rights because they do not own land. Even those who have been given back their land through government's land restitution, where given land without water rights. They have to go through difficult procedures of making application for water rights use and is a very long process.

It was discovered that Section 27(1) of the National Water Act acknowledges the existing lawful water use right under riparian principle, and on the other hand promote equitable access to water for all people in South Africa. Little has changed in improving the sufficient water supply and sanitation services in the former homelands and for black people who reside in townships and rural areas. Evidence of the abovementioned assertion is the current sectoral distribution of water use in South Africa. Agriculture tops with 62% water use; urban areas water use is 23% and rural areas is 04% (DWS, 2015). All these contradict what the 1996 Constitution, and the 1998 National Water Act, seek to achieve as their objectives. Unlike in the former white areas, former black townships are characterised by old poor water infrastructure while the former homelands' rural areas depend mostly on boreholes and natural streams.

The research findings also discovered that the project of upgrading the Politsi Water Treatment Plant has been stalled by farmers around Politisi area. The Politsi agriculture Water User Association has disputed the process of increasing pipelines to draw 10.5ml per day from the Vergeleegen Dam. The matter has been referred to the Water Tribunal for judgement. During the research interviews with managers from MDM and LNWB, it was revealed that the dispute is around dynamics and discourses of water allocation which are caused by policy disjuncture.

- Old infrastructure

The research findings indicate that the problem of old and dilapidated water and sanitation infrastructure contributes immensely on the water crisis experienced in Ga-Kgapane Township. The continuous burst pipes in the internal reticulation network of water and sanitation is mostly caused by the aged asbestos pipelines which are no longer able to stand pressure and underground heat. The findings reveal that the internal reticulation network of Ga-Kgapane is made of asbestos materials and is more than fifty years old. It has been confirmed by both managers in the MDM and GLM that municipality experienced unaccounted water losses due to pipes burst and leakages in Ga-Kgapane Township, which contributes to a huge fruitless and wasteful expenditure.

- Lack of maintenance

The research findings reveal that the lack of proper maintenance in Ga-Kgapane Township aggravate the water and sanitation services' problems. Both managers of MDM and GLM acceded to the fact that no sufficient money for the maintenance of water and sanitation infrastructures. The MDM did not avail budget for operation and maintenance for water and sanitation services. Due to lack of proper maintenance of water and sanitation infrastructure, Ga-Kgapane township experienced continuous sewerage pipe bursts, leakages and blockages of manholes which overflow and contaminate natural streams. The biggest river, Modubatse has now turned into a perennial river due to the continuous flow of sewerage waste water which pose a health threats to both animals and human beings in Ga-Kgapane, as well as those people at downstream who use water for human consumption.

- Water loss

Research findings have revealed the three major contributors of water loss in Ga-Kgapane as lack of maintenance; continuous bursts and leakages; and delays in attending reported pipe bursts. The community survey's results show that residents agree that the municipality takes a longer time to attend to a reported pipe burst which result with huge water loss. The findings reveal that major water losses take place in the older section of the township such as Losmycherry, Tsamahansi, Mapolankeng

and Kgapamadi where the households use old-type of sewerage systems called 'long drop', which consumes hundreds of litres to flush waste.

Water losses were as a result of leaking pipes and taps and dripping toilets that are not getting attention or repairs. During the site visit at Ga-Kgapane reservoir, it was discovered that there is a huge crack that losses a lot of water throughout day and night, non-stop.

- Non-payment of municipal services

The findings reveal that out of 70 respondents, only 23 shows that they do pay for municipal services while 40 respondents did not pay because they alleged that they do not get sufficient water supply and proper sanitation services. This has been confirmed that indeed the majority of residents in Ga-Kgapane Township get water through taps once per week as indicated in the study's problem statement. It was also revealed that the alternative supply through water tankers do not delivered as promised and residents turn to buy water from those who have private boreholes, and some spend money on paying transport to get water.

- Pollution of natural streams

The research findings reveal that pollution of natural streams by sewerage waste water is rife in Ga-Kgapane Township and it has had a negative impact on the lives of animals and people, especially those at the downstream who use stream water for human consumption. It was discovered that almost 21 sewerage manholes contribute to this waste water spillage into Modubatse River and the problem cannot be resolved due to the continuous shortage of water supply in Ga-Kgapane Township. During the week, sewerage pipelines and manholes at Meloding, Masakhaneng, Mannenburg, Mannenburg Extension, Parktown and Mzimhlophe sections get blocked due to lack of water, and when water become available pipes burst and sewerage discharges flow along streets while manholes blocked, overflow into the natural streams and cause pollution.

- Institutional capacity

The evidence from the research findings shows that the institution's capacity in water and sanitation services directorates of both GLM and MDM contribute towards challenges experienced in the provision of water supply and sanitation services in Ga-Kgapane. The findings expose the lack of human capital and lack of requisite skills as the major challenges in the water and sanitation directorate. Out of 780 employees that were transferred by DWS to MDM, only 442 employees are currently working.

Those employees who have retired, passed on and resigned were never replaced. Critical positions were not filled in and employees were placed on acting capacities without requisite skills and knowledge in water and sanitation services.

In GLM, the findings reveal that integration of former DWS and MDM employees was a serious challenge and have impacted negative on the provision of water supply and sanitation services in Ga-Kgapane Township. All those mentioned employees were rendering different services in Ga-Kgapane without cooperation, communication and coordination of their work. The findings show that there is an impression that the water and sanitation functions do not fall within GLM's mandate even after the signing of WSP agreement by GLM and MDM. No direct accountability on water and sanitation services to the GLM council. GLM council don't consider water and sanitation budget in its main budget, and water and sanitation employees do not feature in its organisational structure. This misinterpretation of the WSP signed by the MDM and the GLM reveals the level of institutional incapacities of the two municipalities.

- Lack of integrated planning

The research findings show no signs of coherent planning among key stakeholders in the provision of water and sanitation services in Ga-Kgapane Township. Evidence to this, is the discovery of disjointed planning by key stakeholders in addressing the challenges of water crisis in Ga-Kgapane Township. For example, the process of Integrated Development Planning and budget on water and sanitation services is not included in the GLM programmes, but only done at the district level. On the other hand, research findings reveal that when the Minister made intervention in Ga-Kgapane

Township, MDM played a little role during the planning and the implementation phases of the project, hence the project turned into a white elephant.

During interviews, managers of GLM and MDM acceded to the fact that the signed MOU failed because of the different approaches in planning and different expectations from both parties. For example, the MDM expected that the GLM will collect water and sanitation revenue and put it in a separate bank account of the MDM. The GLM did not bank the money as expected, citing reasons that the MDM did not give them a budget for operations and maintenance, and they do not pay for bulk water supplied by LNWB in the Greater Letaba Municipality. If there was coherent and integrated planning between the MDM and GLM on water related issues, all the above-mentioned challenges should have been avoided.

- Lack of proper planning and public participation

In terms of local government legislations, proper planning is done through consultation with members of the public. Public participation plays a vital role in the Integrated Development Plans of municipalities. The research findings show that residents of Ga-Kgapane are not fully involved in the planning of water and sanitation services by both the MDM and GLM. The worst part of lack of public involvement in the affairs of GLM, is the reluctance of local councillors to convene community meetings. This deprives residents to have a say on matters of water supply and sanitation services in Ga-Kgapane Township.

The community survey indicates that during GLM's IDP public participation processes and issues related to water and sanitation are not discussed. They are just noted and referred to the MDM without getting any feedback. The findings further reveal that water related projects are implemented by the MDM without the knowledge of the community members. This has been confirmed by local councillors who blame some municipal officials for providing projects implementation information in a short space of time which makes it difficult for them to inform community members. Community members complain that ward councillors are no longer convene monthly community meetings as expected, and this denied them opportunities to raise their concern about water and sanitation issues in Ga-Kgapane Township.

- Poor customer relations

The research findings show that the GLM and the MDM do not consider the rights of their customers. They do not treat water and sanitation services as trading commodities and households as their customers. This makes the two municipalities to even overlook matters of water as human rights issues that need to be address by them as government. Community survey reveals that residents of Ga-Kgapane are not satisfied with the services they get from the GLM and MDM regarding water and sanitation services. For example, the GLM failed to respond accordingly with the agreed turnaround time for attending to reported pipes burst as per municipal service charter. The findings show that the majority of residents of Ga-Kgapane Township rated water and sanitation services as poor. On the other hand, Ga-Kgapane residents do not pay their dues on municipal services because of insufficient water supply and poor sanitation services.

At another level, the findings indicate that the customer relations between the MDM and LNWB are not good. The LNWB sells bulk water to the Mopani District Municipality as WSA but the district failed to pay for its accounts.

- Poor monitoring

The research findings reveal a serious lack of monitoring on the work done on the water and sanitation services in Ga-Kgapane Township by both the MDM and the GLM. The work at Ga-Kgapane Waste Water Treatment plant is not monitored. After viewing the University of Limpopo's video, the researcher paid a visit to the plant and found some sections of the plant that were not working. The findings also revealed the abuse of overtime by some officials from both the MDM and GLM. Some officials in water and sanitation services booked the job cards for repair and delay their jobs until they have overlapped to after working hours or weekends so that they claim for overtime. Lots of money has been spent on overtime than on normal working hours and days. Furthermore, this kind of deliberate delay causes the municipality to have huge water losses, fruitless and wasteful expenditures. When the sewerage pipes burst or manholes block, lot of waste runs into natural streams and pollutes the river water.

Examples of boreholes that were drilled and equipped in the location of the previous sewage open ponds in Ga-Kgapane, amplifies the issue of the lack of monitoring. The project was fully completed with a pump machine, pump houses and electricity, contractor(s) were paid but at the end the extracted water failed tests for human consumption. Research interviews reveal that many contractors were appointed to fix the cracks at Ga-Kgapane Reservoir without success, and still large volumes of water are lost every day and night as depicted in one of the pictures in chapter four of this study.

On monitoring billing systems on water supply, the findings indicated lot of discrepancies in the billing of Ga-Kgapane Township households. Even when residents of Ga-Kgapane didn't receive sufficient water on daily basis, their accounts are billed with exorbitant amounts. This has been confirmed by both managers responsible for water and sanitation in both the MDM and the GLM during interviews. One of them said "if the water doesn't flow in the pipes, the pipes get filled with the air. When the water starts to flow in the pipes, it pushes the air out of the pipes and the meters run the counting". The research findings show that there is no accountability on the water related transactions between MDM and GLM, despite the signed WSP agreement. The MDM does not monitor the activities and water revenue transaction in the GLM, it waits for year-end reconciliations for National Treasury compliance and audit processes. On the other hand, GLM council does not have systems to can monitor the water revenue transitions because no report has been tabled in council for considerations in the last three financial years.

Objective 4: To determine the fundamental approaches that are important to improve the provision of water and sanitation in Ga-Kgapane.

To get to the bottom of the objective four, the researcher explores how key stakeholders implement government policies, as well as how they implement agreements signed on provisioning of water related services in the study area. South African government practices a Constitutional Democracy which put the rule of law ahead of everything. Therefore, it is imperative that whatever fundamental approaches

developed in this study to improve the provision of water and sanitation services in Ga-Kgapane Township should be based on the laws and policies of government.

- Implementation of government policies

The research findings reveal that all interviewed key stakeholders acceded to the fact that the Constitution of the Republic of South Africa and its Bill of Rights have been violated in the processes of provision of water and sanitation services in Ga-Kgapane Township. Residents of Ga-Kgapane Township do not get sufficient water and proper sanitation services. The findings show that Section 24 of the Constitution is violated because natural streams around Ga-Kgapane are contaminated with sewerage grey water. Manholes are blocked and overflowing; there are continuous pipes burst; and the township is engulfed with a bad smell and it poses a health risk to the residents. The findings further demonstrate that the Department of Water and Sanitation and Mopani District Municipality have failed in many occasions to live up to the expectations of the National Water Act and the Water Services Act, to ensure that residents of Ga-Kgapane's rights to access sufficient water and basic sanitation services are guaranteed.

On the other side, the findings illustrate how the GLM failed to implement the MOU signed with the MDM on WSP agreement. Both GLM and MDM failed to develop and implement by-laws on water and sanitation services in Ga-Kgapane Township. The research findings reveal that the MDM had last adopted their water related by-laws ten years ago (almost last two terms of municipal council). The contamination of natural streams, overflow of sewerage manholes and open flow of sewerage waste water on the streets and inside households' yards violate the National Environment Management Act. The study indicates that failure by councillors of Ga-Kgapane Township to convene regular community meetings contravene the municipal internal policies, Municipal Systems Act and White Paper on Local Government, regarding public participation and community involvement in the affairs of the municipality.

- The implementation of agreements signed by key stakeholders on water related services in Ga-Kgapane Township

The research explores how various key stakeholders monitor and account to each other in terms of the signed agreements on water related services, and how these agreements have an impact on the provision of water and sanitation services in Ga-Kgapane Township. The research findings confirm that there is no formal signed agreement between the DWS and the MDM. The agreement is based on Constitutional requirements, National Water Act, and Water Services Act which are supported by local government legislations such as Municipal Structures Act, Municipal Systems Act and Municipal Finance Management Act. The MDM has failed to ensure that residents of Ga-Kgapane have sufficient water supply and sanitation services even though the Municipal Structures Act gave the district powers and functions necessary to perform the Water Services Authority as outlined in the water Services Act, 1997.

The findings further show that the MDM has failed to account and to involve the community in policy formulation and decision-making on water services as required by the Constitution and the local government legislations. It also failed to adequately account on its spending on the water services budget, including its allocated funds for operation and maintenance, water and sanitation's Free Basic Services for indigent households in Ga-Kgapane Township. As a WSA, the MDM failed to make the GLM to account to its council on water related budget, management of water revenue and debts as per WSP agreement.

On the other hand, the research findings reveal that the DWS too, failed to hold the MDM accountable when it failed on its obligations as a WSA on the provision of water and sanitation services in Ga-Kgapane Township. The National Water Act dictates that the WSA are accountable to the Minister of DWS, as the public trustee of water resources on behalf of the National Government. The Water Services Act empowers the DWS to remain the water sector leader, by regulating, monitoring and supporting all stakeholders to ensure effective service provision.

5. 3 Recommendations of the study

After the identification of research findings on the provision of water supply and sanitation services in Ga-Kgapane Township, the study herein makes the following recommendations:

5.3.1 The use of Intergovernmental Relations Forums to address the plight of the provision of water and sanitation services in Ga-Kgapane Township.

The MDM as the district municipality and a WSA must use District IGR Forums to convene all stakeholders in water and sanitation services to address the Ga-Kgapane Township challenges. The forum is the relevant platform to discuss matters of common interest; launch and resolve disputes among stakeholders. It is through the IGR forum where all spheres of government, parastatals, private sectors, community-based organisations and ward committee members gather under one roof and do joint planning; coordinate and align their priorities; budgets; policies and activities.

5.3.2 The use of Integrated Development Plans of the MDM and the GLM as basic tools to resolve the problems of water and sanitation services in Ga-Kgapane Township

The Integrated Development Plan is the basic tool for any development in the local government sphere. The IDPs of municipalities are the guiding posts of development at grassroots level and it requires the involvement of every institutions and persons in that local space. Same as IGR Forum, the IDP Representative forum involves all spheres of government, parastatals, private sectors, NGOs, CBOs, and others to do joint planning and alignment of priorities, budgets, programmes and projects in an integrated manner. The MDM and the GLM should use their Integrated Development Plans to solicit inputs from other key stakeholders to address the problems of water and sanitation services in Ga-Kgapane Township.

The programmes and projects in the municipal budget are mainly funded through the National Fiscus and the municipal's IDP is the guiding source to get funds. The IDP documents are used by the national and provincial departments to locate where they should assist in the integrated development of the local areas. In most cases, the

national and provincial departments' budget and priorities are aligned through municipal IDPs. If something does not feature in the IDP documents, there is likelihood of not getting chances of been in a municipal budget and will not get funded. On that basis, if challenges of water and sanitation in Ga-Kgapane do not get expression in the MDM and GLM's IDPs, they are likely not going to feature in their budgets and will not get funds and subsequently will not be implemented or get resolved.

5.3.3 That the MDM as a Water Services Authority should lead key stakeholders in resolving water related challenges in Ga-Kgapane Township

The MDM as the WSA is the champion of water and sanitation services and it has delegated the WSP to the GLM as well as outsourced the supply of bulk water to the LNWB. The study recommends that the MDM should lead key stakeholders in resolving water related challenges in the provisioning of water and sanitation services in Ga-Kgapane Township. The delegation of WSP and outsource of bulk water supply do not take away the responsibility of the MDM to be WSA.

The MDM have the responsibility to study each challenge impeding the adequate supply of water and sanitation services in Ga-Kgapane and come up with ways to resolved them in terms of the required legislation. First and foremost, the MDM should get all challenges that need its attention resolved and issued out directives to other role players and stakeholders to develop ways to resolve theirs. All those mentioned directives should be mandatory in terms of the service level agreement signed between parties. Below here are examples of challenges identified in the study and their recommendations:

- Insufficient water supply

The MDM and the GLM should show interest in the upgrading of the Politsi Water Treatment Plant and assist the LNWB to unlock any impediment or impasse on the project. They must start to develop a joint project to revamp and replace the old infrastructure in the reticulation systems of water and sanitation in Ga-Kgapane Township, to accommodate the increased volume of water in line with the newly approved water license for Politsi Water Treatment Plant.

- Water policy disjuncture

The DWS should fast-track the transformation processes in the water sector by encouraging the inclusion of former disadvantaged communities to acquire water rights. The study recommends that the DWS must intervene in the impasse between the LNWB and the Politsi Water-Users Association to release its unused water rights and, to be considerate on the plight faced by Ga-Kgapane Township residents regarding insufficient water supply.

- Old infrastructure

The MDM should in consultation with the GLM commission the feasibility study to work on a developmental plan of replacing the old long-drop sewage system and asbestos pipes in the reticulation network of Ga-Kgapane Township. At the meantime, the MDM and the GLM must come up with a comprehensive programme to deal with issues of water demand and management in the township. This should include amongst others, public awareness on water preservation, repairs of leaks and dripping toilets sets in both private households and public places.

- Lack of maintenance

The WSP agreement should be revised to explicitly cover the operation and maintenance on the water system in Ga-Kgapane Township. The GLM should develop a schedule of maintenance plans for water and sanitation infrastructure in Ga-Kgapane Township. The MDM must make funds available in the budget for operation and maintenance of water system in Ga-Kgapane Township.

- Water loss

To minimise water loss in Ga-Kgapane, the study recommends the replacement of long-drop toilets system by modern water efficiency toilets system. There must be a continuous inspection of broken water meters and taps; leaking water pipes; and dripping toilets sets. The GLM should create a mechanism to enhance supervision of work done by the water and sanitation services employees and monitoring of turnaround time for repairs of reported pipes burst.

- Pollution of natural streams

The GLM should come up with a way to clean natural streams and their surroundings, as well as ways of preventing the waste water to get its way into streams. The

operation and maintenance team must always monitor the blocked manholes. The GLM should intensify the programme of supervision on employees who attend to repairs and maintenance. Reported cases should not take a long time without been attended to.

- Institutional capacity

The study recommends that the GLM must do a skills audit; and come up with a comprehensive recruitment plan for the water and sanitation services unit. The MDM should officially hand over all employees who work in the GLM and transfer their budgets for proper staff management and accountability. Furthermore, the GLM must develop programmes for capacity building in the form of in-service training initiatives.

- Proper planning and public participation

The study recommends that both the MDM and the GLM should encourage and create platforms for community members to participate in the affairs of their municipalities. Ward councillors and ward committee members must adhere to their schedules of monthly community meetings to give feedback and to source new mandates from their constituencies. Municipal officials should communicate information about the implementation of project in time, so that councillors and community members are not just taking by surprises.

It further recommends that public participation in planning for water and sanitation services should be integrated in the processes of GLM's IDP and be given opportunities to be discussed fully with members of the public.

- Poor customer relations

The study recommends that the GLM should start to treat residents of Ga-Kgapane Township as end-users and customers of water and sanitation services, who expect value-for-money, affordable services, courteous and responsive services as outlined in the White Paper on Local Government.

5.3.4 That all stakeholders should assist in developing fundamental approaches to improve the provisioning of water and sanitation services in Ga-Kgapane Township.

The Water Services Act clearly distinguishes the roles played by different key stakeholders in the provisioning of water and sanitation services. For example in case of provision of water and sanitation services in Ga-Kgapane Township: The DWS is the custodian and play a monitoring role through water regulations and laws; LNWB serves as a water bulk supplier on behalf of the MDM, advisor to the Minister and implementation agent of the DWS; the MDM is a Water Services Authority and signed contract with other stakeholders to assist in the provisioning of water related services in Ga-Kgapane; and the GLM's role is of a Water Services Provider to the water services areas under its jurisdiction.

Out of what has been outlined at the above-mentioned statement, the study recommends that all key stakeholders should assist in developing fundamental approaches within their mandates to improve the provisioning of water and sanitation services in Ga-Kgapane Township.

5.4 Future Research

The study's revelations could form a basis for future research on the effectiveness of the MDM's Water Services Provision with local municipalities in the district. The Mopani District Municipality has for many years received undesired audit opinions ranging mostly between disclaimer and adverse due to water related transactions with local municipalities. This also affects local municipalities, and it is the reason why no municipality in the Mopani district received unqualified audit opinions without matters (clean audit). All of them have been qualified on matters related to water transactions because of the WSP agreement signed with the MDM.

5.5 Conclusion

The aim of the study was to investigate the provision of water and sanitation services in Ga-Kgapane Township. Since the year 2002, the residents of Ga-Kgapane

Township live without sufficient bulk water supply. They only receive tap water once per week and depend on water tankers for water supply during the week. The research data collection tools used for the study were: semi-structured interviews, documentary data extraction, questionnaires, and observations. The sample size comprised of 77 key role players and informants from MDM, GLM, LNWB, Ward councillors, and some community members.

The study reveals that the key challenges in the provision water and sanitation in Ga-Kgapane Township does not only lie with insufficient water supply, but with poor water management and poor governance. The research findings have further revealed a number of challenges impeding the adequate provision of water supply and sanitation services in Ga-Kgapane Township. For example: deficit in bulk water supply; policy disjuncture; non-payment of municipal services; pollution of natural streams; lack of human capital and requisite skills; lack of community involvement; water losses; old water and sanitation infrastructure; lack of maintenance; non-adherence to WSP agreement signed by the MDM and the GLM; disregarding turnaround time for attending reported pipe burst and lack of monitoring on the work of service providers and municipal officials.

The above-mentioned challenges are critical and if they are not addressed; the LNWB's upgrades of the Politsi Water Treatment Plant and increases in the bulk water supply, the problem of water and sanitation services in Ga-Kgapane Township will never get resolved. To get the matter resolved, key stakeholders should develop a comprehensive plan and implement study's recommendations.

5.6 Limitations of the study

Even though water is a challenge in the entire municipality of Greater Letaba, the research is only limited to the provision of water and sanitation in Ga-Kgapane, Wards 3 and 44. The other unfortunate part is that the research did not include the surrounding villages that are parts of Wards 3 and 4 because they are not getting their water through the Politsi Water Treatment Plant's reticulation network that supplies the township. Furthermore, not all the people and the households have an opportunity to

participate in the study. Only those who have been chosen through sampling represented the general population of the Ga-Kgapane residents.

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APPENDIX A
SUPPORTING DOCUMENTS



University of Limpopo
Faculty of Management and Law
OFFICE OF THE EXECUTIVE DEAN

Private Bag Sovenga, 0727, South Africa
268 2558, Fax: (015) 268 2873, Email: iohannes.tsheola@ul.ac.za

18 October 2016

G.H Modjadji (201533355)
TURFLOOP GRADUATE SCHOOL OF LEADERSHIP
MASTER OF PUBLIC ADMINISTRATION

Dear GH Modjadji,

FACULTY APPROVAL OF PROPOSAL

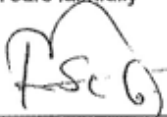
I have pleasure in informing you that your Masters proposal served at the Faculty Higher Degrees Committee meeting on 05 October 2016 and your title was approved as follows:

"An investigation into provisioning of Water and Sanitation Services in Ga-kgapane, Limpopo".

Note the following: The study

Ethical Clearance	Tick One
Requires no ethical clearance Proceed with the study	
Requires ethical clearance (Human) (TREC) (apply online) Proceed with the study only after receipt of ethical clearance certificate	✓
Requires ethical clearance (Animal) (AREC) Proceed with the study only after receipt of ethical clearance certificate	

Yours faithfully


24/10/2016

Prof MP Sebola

Chairperson: Faculty Higher Degree Committee

CC: Pro K Phago, Supervisor and Programme Manager, and Prof M.X Lethoko, Director of School

Finding solutions for Africa

INTERVIEW GUIDE – DATA COLLECTION AUGUST 2017

1. INTERVIEW GUIDE FOR WATER SERVICE AUTHORITY (WSA) AND WATER SERVICE PROVIDER (WSP)

1.1. MOPANI DISTRICT MUNICIPALITY (Water Service Authority)

My name is **Godfrey Modjadji**. I'm from the University of Limpopo. I am a student doing research and not representing government or any political party. You are warmly welcome to this short interview regarding the provision of water and sanitation services in Ga-Kgapane. Your participation in this interview is voluntary, you have the right to respond or not to respond to questions asked. Your contribution to this study is very important because it will assist in improving the water and sanitation service delivery in your area. This interview will be audio recorded and your answers will be treated with high confidentiality. Any further inquiry can be directed to Godfrey Modjadji at 0828565227 or email to: city.modjadji@gmail.com

QUESTIONS:

Full names:

Organisation:

Position held:

Date of interview:

- (1) How do you relate with GLM and LNWB in the provisioning of water and sanitation services in Ga-Kgapane?
- (2) Do you have any constraint or challenges you faced with in providing water and sanitation services in Ga-Kgapane? If yes, can you elaborate on those challenges?
- (3) What will be required to address those challenges?
- (4) Do you have strategies in place to provide water and sanitation services in Ga-Kgapane? If yes, what involve your strategies?
- (5) Is your strategies effective? And why do you think so?

- (6) How do you develop and implement your Integrated Development Plan (IDP) in your municipality as a Water Service Authority?
- (7) Do your municipality have water and sanitation policies or by-laws? If yes, how effective are they assist you to regulate issues relating to water and sanitation services in Ga-Kgapane?
- (8) Does your municipality have a water resource management strategy? If yes, what is entailed in your strategy?
- (9) How do you apply water conservation and water demand management in Ga-Kgapane?
- (10) Does your municipality have a water service development plan? If yes, how do the plan helps in addressing problems of Water and Sanitation Services in Ga-Kgapane?
- (11) Do you involve community members in your development planning of water and sanitation services? If yes, how so have you involved community of Ga-Kgapane in your planning?

1.2. GREATER LETABA MUNICIPALITY (Water Service Provider)

My name is **Godfrey Modjadji**. I'm from the University of Limpopo. I am a student doing research and not representing government or any political party. You are warmly welcome to this short interview regarding the provision of water and sanitation services in Ga-Kgapane. Your participation in this interview is voluntary, you have the right to respond or not to respond to questions asked. Your contribution to this study is very important because it will assist in improving the water and sanitation service delivery in your area. This interview will be audio recorded and your answers will be treated with high confidentiality. Any further inquiry can be directed to Godfrey Modjadji at 0828565227 or email to: city.modjadji@gmail.com

QUESTIONS:

Full names:

Organisation:

Position held:

Date of interview:

- (1) How do you relate with MDM and LNWB in the provisioning of water and sanitation services in Ga-Kgapane?
- (2) Do you experience any constraint or challenges when you provide water and sanitation services in Ga-Kgapane? If yes, what are those challenges?
- (3) What strategies are in place to address water and sanitation problems in Ga-Kgapane?
- (4) Do you have service delivery agreement with MDM? If yes, what are the conditions for the provision of water and sanitation in Ga-Kgapane?
- (5) How is your customer's relation? If you have to rate it from 1 up to maximum of 5, how much can rate it?
- (6) How do you handle customers' complaints?
- (7) How long does it take you to attend to a reported query relating to water and sanitation services in Ga-Kgapane?

- (8) Is your communication with your customers effective? How so?
- (9) Do you have water services business plan? If yes, how far have you implemented it to date?
- (10) How do you do your monitoring and reporting on issues related to provisioning of water and sanitation services in Ga-Kgapane?
- (11) Do community of Ga-Kgapane pay for their municipal services such as water and sanitation?

Thank you very much for your time.

1.3. LEPELLE NORTHERN WATERS (Implementing Agency)

My name is **Godfrey Modjadji**. I'm from the University of Limpopo. I am a student doing research and not representing government or any political party. You are warmly welcome to this short interview regarding the provision of water and sanitation services in Ga-Kgapane. Your participation in this interview is voluntary, you have the right to respond or not to respond to questions asked. Your contribution to this study is very important because it will assist in improving the water and sanitation service delivery in your area. This interview will be audio recorded and your answers will be treated with high confidentiality. Any further inquiry can be directed to Godfrey Modjadji at 0828565227 or email to: city.modjadji@gmail.com

QUESTIONS:

Full names:

Organisation:

Position held:

Date for interview:

- (1) What is the current capacity of your water source?
- (2) Is your water source sufficient to can supply the demand? If not, what are the challenges?
- (3) How are you going to address those challenges to improve the situation?
- (4) How do you relate with MDM in providing water services in Ga-Kgapane? Are you satisfied with the relation? If not, why and what can be possible solution(s).
- (5) Do you experience any challenge/constraint in providing water services in Ga-Kgapane?
If yes, what are those challenges?
- (6) What do you think should happen to improve on the situation?
- (7) Do you have anything you want us to know about your work around provisioning of water services in Ga-Kgapane?

Thank you very much for your time.

QUESTIONNAIRE GUIDE FOR COMMUNITY MEMBERS

My name is **Godfrey Modjadji**. I'm from the University of Limpopo. I am a student doing research and not representing government or any political party. The purpose of this research is to get views from the residents of wards 03 and 04 in Ga-Kgapane and their experiences regarding provision of water and sanitation services. You are hereby kindly requested to complete the following questionnaire. Your participation in this study is voluntary, you have the right to take part or not. Your contribution to this study is very important because it will assist in improving the water and sanitation service delivery in your area. Your answers will be treated with high confidentiality. Any further inquiry can be directed to Godfrey Modjadji at 0828565227 or email to: city.modjadji@gmail.com

QUESTIONNAIRE:

(1) PERSONAL DETAILS

(a) Full names

(b) House
number.....Suburb/Section.....

(c) Gender Male Female

(d) Age

(e) Number of people in the household

(f) What is your level of education?

None primary Secondary Diploma Degree

(g) The owner of the household is Employed Unemployed self-employed

(h) How is the household earning per month?

<R400 R400-R800 R800-R1600

R1600-R3200 R3200-R6400 R>R6400

(2) Do you experience water shortage in your area? Yes No

If yes, for how long?.....

(3) Do you experience sanitation problem in your area? Yes No

If yes, for how long?.....

(4) What do you think may be the cause of this problem?

.....
.....

(5) What kind of solution can you propose to deal with the problem?

.....
.....

(6) Where do you get water when there is no supply?

.....
.....

(7) How much does it cost you? R0 >R100 R110-R300
R301-R500 R501-R700 >R700

(8) Where is, your toilet located? Inside the house Outside the house

(9) Is your water and sanitation infrastructures well maintained? Yes

NO

If yes, how often?

(10) When you report pipe burst, how long does it the municipality to attend to your problem?

Less than a week 1-3 weeks A month 2-3months More

(11) How often does your councillor convene community meetings?

Weekly Bi-Weekly Monthly Quarterly half-yearly

(12) When was, the last meeting held?

No meetings This month 2-5 months back 6-12 months' back

last year

(13) Do the community meetings meet your expectations regarding issues of provision of water and sanitation services in our area? Yes No

If not, can you propose a possible solution to the matter?

.....

.....
.....

(14) Do you receive water from municipal water tanker? Yes No If yes, how many times do you receive per week?

Once Twice Thrice More

(15) How would you rate the quality of water services provided by the municipality in your area? Very poor Poor Fair Good Very good

(16) How would you rate the quality of sanitation services provided by the municipality in your area?

Very poor Poor Fair Good Very good

(17) Are you satisfied with the performance of your municipality in terms of provisioning of?

water and sanitation services in your area? Yes No Not sure

(18) Which day of the week do you receive water from your tap?

Sunday Monday Tuesday Wednesday Thursday

Friday Saturday

(19) Why are you satisfied or not satisfied?

.....
.....
.....

(20) Are you paying municipal services? Yes No

If,not,
why?.....
.....

(21) When last have, you paid your municipal services account(s)?

- 1-6 months back 7-11 months back Last year 2-3Years
More than 3 years

(22) Any other comment(s)

.....
.....
.....
.....
.....

Thank you very much for your time.



University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 4029, Fax: (015) 268 2306, Email: Abdul.Maluleke@ul.ac.za

**TURFLOOP RESEARCH ETHICS
COMMITTEE CLEARANCE CERTIFICATE**

MEETING: 02 November 2017

PROJECT NUMBER: TREC/409/2017: PG

PROJECT:

Title: An investigation into provisions of water and sanitation services in Ga-Kgapane, Limpopo
Researcher: GH Modjadji
Supervisor: Dr F Ganda
Co-Supervisor: N/A
School: Turfloop Graduate School of Leadership
Degree: Masters in Public Administration


PROF. TAB MASHEGO

CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: REC-0310111-031

Note:

- i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
- ii) The budget for the research will be considered separately from the protocol.
PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.



University of Limpopo
Turfloop Graduate School of Leadership
P O Box 756, Fauna Park, 0787
Tel: (015) 268 4179, Email: nthabiseng.letsebe@ul.ac.za

MEMORANDUM

To : To Whom It May Concern

From : Dr. F Ganda
Supervisor

Date : 10 October 2017

Subject : **Request for Permission to Conduct Research Study**

Dear Sir/Madam,

This is to confirm that student Modjadji GH (201533355) is an MPA registered student for 2017 and the title of his study is "An Investigation into the Provisioning of Water and Sanitation Services in Ga-Kgapane, Limpopo" and he would like to conduct a research study in your municipality and request permission to do so.

Thank you,

Regards

Dr. F Ganda
Supervisor

Enquiry: Modjadji G.H
0828565227/ Email: city.modjadji@gmail.com
P.O.BOX 4793
GA-KGAPANE
0838
02 October 2017

Attention: Chief Executive Officer
Lepelle-Northern Waters
Private bagx
Polokwane

Dear Sir

RE: REQUEST TO CONDUCT A RESEARCH

I hereby request to conduct some interviews with your officials regarding my academic research.

The topic of my research is "*An investigation into provisioning of water and sanitation services in Ga-Kgapane, Limpopo Province*". The aim of the research is to assess the challenges faced by various stakeholders in the provision of water and sanitation in Ga-Kgapane. I humbly request the manager or official responsible for water supply services in Ga-Kgapane, to avail him/herself for an interview as part of this research. It is hoped that the results of this research will benefit your institution and the municipality, in determining fundamental approaches that are important to improve the provision of water and sanitation services in the area.

Hope my request will be positively considered.

Yours faithfully

G.H Modjadji

RESEARCHER

Request **Approved/ not approved.**

Signed on behalf of the Lepelle-Northern Waters

.....

Date

CEO

Enquiry: Modjadji G.H

0828565227/ Email: city.modjadji@gmail.com

P.O.BOX 4793

GA-KGAPANE

0838

02 October 2017

Attention: Municipal Manager

Greater Letaba Municipality

P.O.BOX 39

Modjadjiskloof

0835

Dear Sir

RE: REQUEST TO CONDUCT A RESEARCH

I hereby request to conduct an academic research within your municipal area, wards 03 and 04 of Ga-Kgapane Township.

The topic of my research is "*An investigation into provisioning of water and sanitation services in Ga-Kgapane, Limpopo Province*". The aim of the research is to assess the challenges faced by various stakeholders in the provision of water and sanitation in Ga-Kgapane. I humbly request the Municipal manager and the Director responsible for technical services to avail themselves for an interview as part of this research. Households will be involved as respondents in the research processes. field team will be appointed by the researcher to distribute questionnaires to the households in Ga-Kgapane. I therefore request the assistance of councillors and ward committee members in wards 03 and 04 during the research processes.

It is hoped that the results of this research will benefit the municipality, in determining fundamental approaches that are important to improve the provision of water and sanitation services in the area.

Hope my request will be positively considered.

Yours faithfully

.....

G.H Modjadji

RESEARCHER

Request Approved/ not approved.

Signed on behalf of the municipality:

Date:

Enquiry: Modjadji G.H

0828565227/ Email: city.modjadji@gmail.com

P.O.BOX 4793

GA-KGAPANE

0838

02 October 2017

Attention: Municipal Manager

Mopani District Municipality

Private Bag x 9687

Giyani

0826

Dear Sir

RE: REQUEST TO CONDUCT A RESEARCH

I hereby request to conduct some interviews with your municipal officials regarding to my academic research.

The topic of my research is "*An investigation into provisioning of water and sanitation services in Ga-Kgapane, Limpopo Province*". The aim of the research is to assess the challenges faced by various stakeholders in the provision of water and sanitation in Ga-Kgapane. I humbly request the Municipal manager and the Director responsible for technical services to avail themselves for an interview as part of this research. It is hoped that the results of this research will benefit the municipality, in determining fundamental approaches that are important to improve the provision of water and sanitation services in the area.

Hope my request will be positively considered.

Yours faithfully

.....

G.H Modjadji

RESEARCHER

Request Approved/ not approved.

Signed on behalf of the municipality

.....

Date

Municipal Manager

11/10/2017
Modjadji GH (Mr)
P.O Box 4793
GA-KGAPANE
0838

Dear Sir,

PERMISSION TO CONDUCT RESEARCH ON PROVISIONING OF WATER AND SANITATION SERVICES IN GA-KGAPANE, LIMPOPO PROVINCE

The aforesaid refers

This letter serves to approve your request to conduct a research on provisioning of water and sanitation services in Ga-Kgapane in Limpopo Province.

Kindly be informed that we have a Plant at the Kgapane area called Modjadji Plant, the Plant provides only water services, not sanitation.

Our Scheme Manager will assist you with water services only, you are advised to contact the municipality in the area for the investigation on sanitation services.

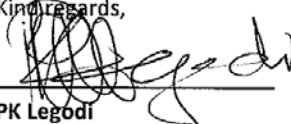
The conditions for approval are as follows:

- (i) You shall use the information acquired for the purposes of research only.
- (ii) You will not exceed the scope of your permission and
- (iii) You shall not interfere with operational activities

You shall be assisted by our Scheme Manager Ms Thabiso Mphahlele, her contact details are (015) 311 7000.

Hope you find the above in order

Kind regards,



PK Legodi

Chief Executive: Lepelle Northern Water

2017/10/12

Water Schemes

Doornkop
Telefax: (015) 453 0627

Ebenezer (Scheme 4) Laboratory
Tel: (015) 276 4700/1
Fax: (015) 276 4998

Flag Bushveld
Telefax: (013) 268 0031

Marble Hall
Tel: (013) 261 1088

Modjadji
Telefax: (015) 311 7000

Nkomo-Nkomo
Telefax: (015) 303 3700

Oliantfontein
Tel: (015) 632 8900 /
(015) 632 8901
Fax: (015) 634 1900

Phalaborwa
Tel: (015) 781 6821/22
Fax: (015) 781 6144

Politi
Tel: (015) 307 9610
Fax: (015) 305 3201

Tubatse
Telefax: (013) 231 7181

Head Office
Tel: (015) 295 1800
Fax: (015) 295 1931

Private Bag x9522
1 Landros Mare, Lepelle House
Polokwane
0699

Website: www.lepellewater.co.za
Email: information@lepelle.co.za

FREE Top-up Anonymous Hotline

Free call: 0800 20 48 57
Free fax: 0800 00 77 88
Email: Lepelle@lip-offs.com



GREATER LETABA MUNICIPALITY

P.O Box 36, Modjadjiskloof, 0835, Tel (015) 309 9246/7/8,
Fax (015) 309 9419, Email:greaterletaba@glm.gov.za

Enq: Mr Mapatha S.P

Date: 05 October 2017

Cell No: 0722772020

Att: Mr G.H Modjadji

RE: REQUEST TO CONDUCT A RESEARCH

1. Kindly take note that your request dated 02/10/2017 to conduct a research at ward 03 and 04 of Ga-Kgapane township has been approved;
2. You are requested to observe the request ethics and;
3. We also request to be privileged with the report.

Mr Mhangwana D
ACTING MUNICIPAL MANAGER





Office of the Director
Corporate Services

MOPANI DISTRICT MUNICIPALITY

Private Bag X9687
Giyani
0826

Tel: +27 15 811-6300
Fax: +27 15 812-4301
E-mail: Kubayit@mopani.gov.za

REF : 9/3/1

ENQ : LEBEPE N.G.

Date : 06 October 2017

To : Modjadji G.H.
PO Box 4793
GA-KGAPANE
0838
E-mail: City.modjadji@gmail.com
Cell. 082 856 5227

Re : REQUEST TO CONDUCT A RESEARCH – YOURSELF.

Your minute dated 02 October 2017 has reference,

In response to your minute quoted above, you are kindly be informed that your request to conduct a research has been approved.

On the basis of the above you are advised to communicate ample time and date(s) to the Municipal Manager and the Senior Manager: Engineering / Water Services for further engagement in relation to the research on investigation into provisioning of water and sanitation services in Ga-Kgapane.

It is trusted that you will find the above in good order,

Kind regards,

pp

MONAKEDI S.R.
MUNICIPAL MANAGER



EDITING CERTIFICATE

I confirm that I have done Language Editing for

GODFREY HENRY MODJADJI

Dissertation titled:

AN INVESTIGATION INTO PROVISIONING OF WATER AND SANITATION SERVICES

The Dissertation now conforms to language editing standards of

University of Limpopo

A handwritten signature in black ink that reads "Lynn N Sibanda". The signature is written in a cursive style with a prominent initial "L".

Signature

Name of Editor: Lynn N Sibanda

Contact Number: 011 050 0376/ 071 989 0983

Email address: lynn@lovetoedit.co.za

Date Issued:

24 May 2018