EXAMINATION OF THE CAPACITY OF LIMPOPO WATER SERVICES AUTHORITIES IN PROVIDING ACCESS TO CLEAN DRINKING WATER AND DECENT SANITATION

By

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DECLARATION

I, Kgoshi Kgashane Lucas Pilusa, Student Number 201406085, hereby declare that the thesis titled "Examination of the capacity of Limpopo Water Services Authorities in providing access to clean drinking water and decent sanitation", submitted to the University of Fort Hare for the degree DPhil in Public Administration, has not previously been submitted to any other university or institution. It is my own work in design and execution. Furthermore, the references used or quoted herein have been duly acknowledged.

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K.K.L. PILUSA

DATE   23 April 2019

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DEDICATION

This thesis is dedicated to my late Father and brother, Masilo William Pilusa and Thabo Eric Pilusa, who have passed on and cannot share the joy of my accomplishment. Their love was amazing, magnificent and inspirational. I am still feeling the vacuum of their departure. May their loving souls rest in eternal amity.

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ABSTRACT

This study analysed the capacity of Limpopo Water Services Authorities in providing access to clean drinking water and decent sanitation. The study raised issues of the state of access to clean drinkable water and decent sanitation through the prism of the municipality and the community. Arguably, the provision of water and sanitation services collapsed, at the level of local government, during the Jacob Zuma administration, because of the escalation of violent service delivery protests due to poor administration and management.

It was discovered that all Water Services Authorities owe the Department of Water Affairs exorbitant amounts of money, well into the range of millions of Rands. This prompted the Water Boards to issue threats that they would limit the provision of bulk water. Such austerity measures compromised citizens who regularly pay for the services provided; hence, it sparked violent protests. One of the major drawbacks of the current institutional arrangements arose from the overlapping mandates of the Department of Water Affairs, Cooperative Governance and Traditional Affairs, Water Services Authorities, Local Municipalities and the Department of Human Settlements. Consequently, the structural design of the intergovernmental system should enforce synergy between all water and sanitation units. The reports produced by all units must be scrutinised, debated and followed through.

The study was anchored in a qualitative research design, grounded in the descriptive approach. Interviews were conducted to acquire information from politicians, administrators and community members. It was discovered that there were no skilled personnel in Water Services Authorities and Water Service Providers and, as such, institutional capacity was in disarray. More importantly, during the interviews conducted for this study, it surfaced that financial mismanagement in all municipalities is conspicuously unacceptable, especially unauthorised, irregular and fruitless expenditures. These situations prevailed under the supervision of the well-established oversight institutions that were tasked to enhance the monitoring and evaluation for good governance, such as The Auditor General of South Africa, the Human Rights Commission and the Public Protector. Professionalism and quality performance remain at a low point, with no improvement in service provision. Therefore, radical enforcement of monitoring and evaluation through Auditor General of South Africa, Human Rights Commission and Public Protector, amongst others, is critical to any attempt to disrupt the status

quo. In addition, the appointment of the heads of these oversight institutions must be removed from the Presidency and be made by the Chief Justice.

The encounters confronting Water Services Authorities and Water Service Providers are complex and may not be resolved by the government alone, without the participation of the private sector and other actors such as Civil Society Organisations, the business community and public entities. Therefore, an area for further research could be an examination of attempts to introduce effective integrated water and sanitation governance structures, and monitoring and evaluation mechanisms, under robust public scrutiny in order to inform immediate and long-term interventions.

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ACRONYMS

AGSA	Auditor General of South Africa
AMCOW	African Minister's Council on Water
ASGISA	Accelerated and Shared Growth Initiative for South Africa
AWF	African Water Facility
AWW	Africa Water Week
CAP	Common African Position
COGTA	Cooperative Governance and Traditional Affairs
CSO	Civil Society Organisation
DORA	Division of Revenue Act
DWA	Department of Water Affairs
DWAF	Department of Water Affairs and Forestry
DWS	Department of Water and Sanitation
EU	European Union
FBS	Free Basic Services
FTYIP	First Ten-Year Implementation Plan
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GMRDC	Govan Mbeki Research and Development Centre
HRC	Human Rights Commission
IDP	Integrated Development Plan
IGR	Inter-Governmental Relations
IMESA	Institute of Municipal Engineering of Southern Africa
IMFO	Institute of Municipal Financial Officers
IPAP	Industrial Policy Action Plan
IWRM	Integrated Water Resources Management
JIPSA	Joint Initiative for Priority Skills Acquisition
JMP	Joint Monitoring Programme
LDP	Limpopo Development Plan
LED	Local Economic Development

LEDET	Limpopo Department of Economic Development, Environment and Tourism
LGDS	Limpopo Growth and Development Strategy
MDGs	Millennium Developmental Goals
MIG	Municipal Infrastructure Grant
MIP	Municipal Infrastructure Programme
MSIG	Municipal Systems Improvement Grant
MTSF	Medium Term Strategic Framework
NDP	National Development Plan
NGO	Non-Governmental Organisation
NGP	New Growth Path
NPC	National Planning Commission
NWP	National Water Policy
ODA	Official Development Assistance
OWG	Open Working Group
PP	Public Protector
RDP	Reconstruction and Development Programme
RHIP	Rural Household Infrastructure Programme
SALGA	South African Local Government Association
SANGOCO	South African Non-Governmental Organisation Coalition
SDA	Service Delivery Approach
SDGs	Sustainable Developmental Goals
SDM	Service Delivery Model
SFfWS	Strategic Framework for Water Services
SLA	Service Level Agreement
SWMP	Storm Water Management Plan
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
WASH	Water, Sanitation and Hygiene
WHO	World Health Organisation
WISA	Water Institute of Southern Africa

WSA	Water Services Authority
WSP	Water Service Provider
VIP	Ventilated Improved Pit

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CHAPTER ONE

INTRODUCTION AND GENERAL ORIENTATION TO THE STUDY

1.

1.1 INTRODUCTION

The transformation of the South African public service since the inception of democracy in 1994, amongst other landmarks, entails that the provision of public goods and services such as health, education, housing, water and sanitation should meet the needs of the citizens. In the process, the government is required to ensure that there is effective and efficient service delivery, which is beneficial to the citizens of the country. In this way, the government is able to increase and improve the delivery of public goods and services to those citizens for whom these were not previously provided, thus, the notion of revolutionary management of water and sanitation is being considered. Water is described as the source of life, the most precious and important of all natural resources, without which the human species cannot survive (DSS, 2010**:** n.p), it therefore stands to reason that access to safe water is a human right (Corcoran, 2010:16). This human right to water entitles everyone to sufficient, safe, physically accessible and affordable water for personal and domestic use (Bellettin, Perez, Warner, Timme and Coombs, 2005:4). Moreover, access to sanitation is described as a necessity to human dignity, according to the Report on the Right to Access Sufficient Water and Decent Sanitation in South Africa (HRC, 2014:1).

The introduction of the Reconstruction and Development Programme (RDP) in 1994, by the government, aimed to redress South Africa's skewed water resources and service legacy, and to recognize the right of all South Africans to access clean water and adequate sanitation (African National Congress, 1994). The key emphasis of the RDP, with respect to water supply and sanitation, was to ensure that basic services are accessible universally in South Africa (Nnadozie, 2011). The Municipal Infrastructure Program (MIP), created in line with the targets of the RDP, aimed to: "rehabilitate, upgrade and provide new municipal infrastructure to meet the basic needs of communities as efficiently and effectively as possible. A further objective was to enhance the developmental capability of municipalities and promote their financial

viability and democratisation. Job creation and the transfer of skills were seen as a secondary benefit" (Torres, 2000:157).

Based on the second set of 32 country status overviews on water supply and sanitation, as commissioned by the African Minister's Council on Water (AMCOW) (2006:2), the South African government embarked on an ambitious programme to eradicate backlogs in water supply and sanitation, underpinned by the development of sound sector policies and legislation. Initially, this program was driven by the central government. In 2003, responsibilities for service provision were devolved to local government in alignment with the constitutional allocation of functions. Although much has been achieved, significant challenges remain. There is a need to build and sustain capacity at the local government level in order to continue to invest in, operate, and maintain services; to innovate and create more effective delivery pathways to reach the "hard to reach"; and, to improve the sustainability of services already delivered.

In light of the difficulties surrounding sanitation provision, programmes specific to sanitation, such as the National Sanitation Programme, were initiated. An evaluation of the National Sanitation Programme was done to identify obstacles to sanitation provision. As a further means of remedying the lag in sanitation services, the bucket eradication programme was established in 2005; the aim of the programme was to replace existing, inadequate bucket facilities with more appropriate and acceptable services. At the proposed completion date, December 2007, "an estimated 252 254 households still needed to be reached" (National Treasury, 2012:132).

The prioritisation of sanitation provision in rural areas was solidified with the establishment of the Rural Household Infrastructure Programme (RHIP) in 2010. The mandate of the RHIP is for "every rural household to have basic sanitation and water" and the Programme is set to use R1.2 billion (DHS, n.d.). "The RHIP is designed to help municipalities to reduce backlogs in sanitation and water supply. It is implemented in seven provinces except in Gauteng and the Western Cape where there are no rural backlogs in sanitation. The other important facet of the

programme is to alleviate poverty by implementing programmes through labor intensive methods" (DHS, n.d.). It is clear from the aforementioned policies and programmes that, since 1994, the primary focus has been on the provision of water supply and sanitation.

The mandate of the Department of Water Affairs is set out in the National Water Act (No. 36 of 1998) and the Water Services Act (No. 108 of 1997). The department's legislative mandate seeks to ensure that the country's water resources are protected, managed, used, developed, conserved and controlled through regulating and supporting the delivery of effective water supply and sanitation. This is done in accordance with the requirements of water related policies and legislation that are critical to the deliverables pertaining to the right of access to sufficient food, the right to water and sanitation, transformation of the economy, and the eradication of poverty (RSA, 2015:1). Therefore, the Water Services Act (1997) tasked the Department of Water Affairs (DWA) with regulating the water sector, Water Boards with providing bulk services, and municipalities as WSPs. DWA is governed by the National Water Act (1998) and the Water Services Act (1997). The department went from being responsible for service provision from 1994, to taking on the role of supporting Water Services Authorities in 2003, and that of national water services regulator in 2010 (DWA, 2013). "As the national regulator, DWA has legal recourse against non-compliance by WSAs, as well as the ability to hand over water services functions to different departments or spheres of government if a major problem. DWA will also be able to intervene in service delivery if there is a gross failure on the part of a WSA and where lives and/or the environment are at risk" (Tissington, 2011:52).

Currently, the Department of Water Affairs is responsible for bulk infrastructure, policy and the regulation of the water sector. Municipalities, sometimes in conjunction with Water Boards, are responsible for water quality and the provision of local water systems (SAICE, 2011). "Locally, in general, water boards – the institutional tier between national and local government – are better equipped in terms of capacity and finance than municipalities. Infrastructure managed by water boards is thus usually in a better condition" (SAICE, 2011:14). There are currently 152 WSAs in South Africa; the Distrct Municipalities (DMs) that are WSAs are largely located in former homelands.

This study focuses on the capacity challenges faced by Limpopo water services authorities in providing access to clean drinking water and decent sanitation as well as the challenges experienced by the municipalities in providing these services to the relevant communities. According to Section 152 of the Constitution of South Africa, two of the objectives of the local government are to ensure the provision of services to communities in a substantial manner and to provide a safe and healthy environment (City of Polokwane, 2015). These national objectives have been in place for 20 years. However, there are various challenges in achieving them. The Limpopo Province consists of the following five District Municipalities and 25 Local Municipalities:

- Mopani District: Greater Letaba, Greater Giyani, Greater Tzaneen, Ba-Phalaborwa and Maruleng Municipalities.
- Vhembe District: Makhado, Thulamela, Mutale and Musina Municipalities.
- Sekhukhune District: Makhuduthamaga, Tibatse, Elias Motsoaledi, Ephraim Mogale and Fetakgomo Municipalities.
- Waterberg District: Mokgalakwena, Mokgophong, Belabela, Thabazimbi, Lephalale and Modimolle Municipalities.
- Capricorn District: Polokwane, Aganang, Blouberg, Molemole and Lepelle-Nkumpi Municipalities. (Mopani District Municipality, 2013/14)

A study conducted by Beyers (2015) revealed that there are several service delivery challenges within the municipalities of the Limpopo province. According to Beyers (2015), the initial challenge faced in the provision of basic services by the municipalities is the lack of infrastructure in rural areas and the proliferation of informal settlements in all the districts of the Limpopo province. This is confirmed by Mothetha, Nkuna and Mema (2015) who indicate that in many municipalities there are infrastructure problems such as leakages of reservoirs, pipes and taps due to damage or aging and, in some areas, tap heads are stolen. This poorly maintained infrastructure affects water supply as there is significant water loss during the distribution process. Many of the municipalities in Limpopo are situated in remote rural areas and, in all these areas, the local communities complain about the inadequate provision of water, sanitation, roads and electricity.

The second challenge in the Limpopo province is the lack of good governance and public participation, which is characterised as a lack of policy coherence, community involvement, political leadership, political interventions and patronage (Beyers, 2015). The situation is worsened by political instability and corruption in the province's municipalities. Mothetha, Nkuna and Mema (2015) who indicate that such interference results in funds that have been allocated to water infrastructure development not being appropriately spent confirm this. The study also revealed that municipal officials find it difficult to divorce party politics from administration due to the tension between the political and administrative levels in the province. The third challenge in the Limpopo province is the inability of the provincial government to monitor and support its municipalities because the provincial government has a low financial budget and limited managerial competence (Beyers, 2015). The fourth challenge identified by Beyers' (2015) research is the poor administrative and financial management within the province; lack of control and accountability were identified as key elements that negatively impact upon service delivery to communities in the municipalities of the Limpopo province.

The financial management challenges facing both the provincial and the local governments in the Limpopo province include, inter alia, inadequate skills for planning, budgeting, financial management, expenditure management, credit control, debt management, risk management and internal auditing, as well as a poor interaction between financial and non-financial information (Beyers, 2015). Beyers (2015) also indicates that there is inadequate administrative and political oversight to strengthen the accountability and responsibility of municipalities in the Limpopo province. There are also inadequate skills for cash flow management, systems to manage audit queries, recommendations by both internal and external auditors and systems in order to manage good governance practices, especially conflicts of interests and accountability frameworks, in provincial departments and municipalities of the Limpopo province (Mbele, 2010:52). Furthermore, Mbele (2010:54) adds that there is also inadequate collection of service charges due to widespread non-payment, however, it is indicated that a correlation exists between the ability and the willingness to pay.

The challenges caused by poor water services management, on the part of the Water Services Authorities in the Limpopo province, have resulted in an increase in service delivery protests by various communities; for instance, in 2012 and 2013 there were three and five service delivery protests in Ba-Phalaborwa Municipality, respectively, and in 2014, 2015 and 2016, the protests rose to eight, four and five, respectively. In the Greater Tzaneen Local Municipality, the residents of Sasekani, Julesberg and Muhlava Cross villages took to the streets after the Mopani District Municipality (Water Services Authority) reneged on its promise to respond to their demands for water supply in May 2015. The communities barricaded the R36 road with burning tyres, stones and various other objects in protest against the lack of clean running water in the area. The protesters said that they were tired of sharing dirty water with animals (Tsatsire, 2008:271). In 2012, the Vhembe District Municipality and Makhado Local Municipality were dragged into court after failing to provide the people of Makhado (formerly known as Louis Trichardt) with sufficient water, as required by law. The communities of the Makhado Local Municipality and the Tshikota Township consume water that is provided by the Vhembe District Municipality.

Vhembe bills these local municipalities for the water every month. However, due to the incapability of their officials, they cannot sustain the service provision. Tshikota residents could only get water from a fire hydrant, or a local school that has a borehole. In addition, the Makhado sewerage system has also not been maintained and, as a result, effluent has been flowing out into vleis, dams and the veld area for years. The Makhado government agrees that the problem is a combination of "ageing infrastructure" and demand versus capacity (De Waal, 2012).

The residents of Ngwalemong in Sekhukhune, in November 2015, were determined to continue protesting until the Sekhukhune District Municipality (Water Services Authority) addressed the lack of access to water and the poor conditions of the roads in the area (Tsatsire, 2008:280). The residents of Mankweng Township and Thoka village, in the Polokwane Local Municipality, also embarked on service delivery protests; the protesters used stones, timber, and burning tyres to blockade the R71 between Polokwane and Tzaneen. Others barricaded a road leading to the University of Limpopo in Turfloop and obstructed traffic heading to the

Mankweng Magistrate's Court. The protesters demanded that they be provided with electricity and taps in their yards instead of communal taps (Tsatsire, 2008:271). This is a sign of an existing problem in service delivery, which can be directly linked to a lack of skills by government employees in the Limpopo province (Ba-Phalaborwa Municipality, 2015). Similarly, there are many protests in the Tzaneen Municipality as a result of the lack of water and sanitation. The Tzaneen Municipality is reported to have experienced major challenges related to its ageing infrastructure as well as the vandalism of infrastructure and unauthorised connections, however, due to financial constraints, the problems continue to persist (Parliamentary Monitoring Group, 2011).

This ensuing discussion in this chapter describes the problem that motivated the researcher to conduct this study, the research questions and objectives guiding the study, and the significance of the study. The chapter further presents the delimitations and ethical considerations of the study. The chapter will conclude with a description of the structure of the study.

1.2 PROBLEM STATEMENT

Water is integral to all life. People throughout the world depend on water for producing food, cooking, drinking and the maintenance of basic health standards. Despite the universal importance of water, there is a serious shortage of water throughout the world. According to Kingsburry, Remenyi and Hunt (2004:277), a shortage of water could have an outright impression on the everyday livelihoods of the public. South Africa is also affected by the serious shortage of water. The effective delivery of water and cleanliness amenities are two of the major challenges confronting the public sector of South Africa since the initiation of egalitarianism in 1994 (Kido, 2008:64). Countless South African boroughs suffer from the pitiful delivery of amenities, particularly about the provision of electricity, housing, roads, storm water drains, water and sanitation. In this respect, it still appears that there is insignificant access as well as a reliance on the usage of communal and substructure amenities by the majority of South African communities.

The distribution of uncontaminated drinking water and decent hygiene to communities in the five District Municipalities of the Limpopo Province, namely, Mopani, Sekhukhune, Waterberg, Capricorn and Vhembe, is not reliable. The communal water standpipes do not receive water for long periods. One of the fundamental contests around the expanse is the failure of the substructure and the municipalities' lack of adequate workforce or capacity, or the lack of the monetary wherewithal to adequately put such structures into operation; hence, the greater portion of the citizens of these municipalities are without access to decent sanitation and harmless water amenities (Raab, Mayher, Mukamba and Vermeulen, 2008:114). The current water supply system and sanitation in the Limpopo Province does not have the satisfactory capabilities to address these concerns. . In the Polokwane Municipality, for example, water supply has been under strain since 2014 (Frankson, 2014). In keeping with the borough, the reservoirs are precisely too little, resulting in water deficiencies, predominantly in high-lying expanses (Frankson, 2014). The borough has admonished the citizens and the associates of the community for not utilising water economically and has warned them to abstain from irrigating their precincts. The failure by the Water Services Authorities (WSAs) to spread sanitation and water services to village dwellers places the public in jeopardy. The rural community are thus forced to make use of exposed founts, water from hand dug wells and rivers, all of which are habitual health and sanitation deathtraps.
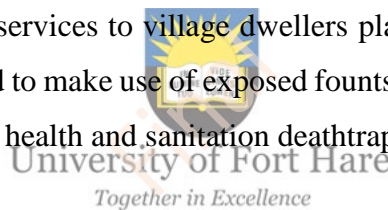
Linked to the poor water supply is the poor provision of decent sanitation. According to Statistics South Africa (Stats SA, 2011), almost two-thirds of the population in Limpopo does not have access to sufficient sanitation, while 27.2% of households in Limpopo are without access to the RDP-acceptable water benchmark. The Limpopo Provincial Government held the Water and Sanitation Summit on 9 July 2015, in the Greater Tzaneen Municipality at Karibu Leisure Resort, in order to discuss the shortage of decent sanitation and unpolluted consumption water in the Limpopo province. The summit, which was centered on the theme of "Sanitation is dignity; Water is life", was attended by patrons from the agricultural society, academic world, mining sector, water customers alliances, non-governmental organisations, local chiefs, the private sector, and civic society organisations with vested interests in and expertise in this erratic commodity and public health. The Premier of the Limpopo province, Mr. Mathabatha, formally launched the high-level meeting whereas Ms Nomvula Mokonyane, the Minister for the Department of Water Affairs, furnished a significant discourse on the

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matter. Minister Mokonyane indicated that it is necessary to go back to the basics, because we stand wrestling along with a rare service and similarly to a typical weather alterations tallying predicament en route for receiving rainfall. The Minister communicated to the representatives that the contemporary ailment cannot be flouted and admonished them to turn up along the Limpopo Water Infrastructure Master Plan (Limpopo Provincial Government, 2015).

Therefore, there has been an on-going debate regarding the effectiveness and capacity of Water Service Authorities in providing quality water service in South Africa to local citizens. As Limpopo province was chosen as a case study, it is evident that the province has been experiencing several violent water service delivery protests in different localities. Hence, the study aimed to explore the state of Water Service Authorities capacities in response to the provision of water and sanitation. Consequently, these account for the state of violent service delivery protests in various communities as water and sanitation provision reached unacceptable levels of poor quality. State institutions meant to monitor and evaluate proper use of state funds and service provisions should be responsive without being abused by leaders of government. There is therefore a need to remodel monitoring and evaluation and policy implementation phase to channel resources in the right direction through continuous and sustainable monitoring and evaluation.

Successively, monitoring and evaluation system remains central to effective and efficient public service delivery principles. It serves as impetus that could enhance the drive for the provision of quality water services to citizens. On the other hand, the fact that there has been a gap in effecting Intergovernmental relations across the globe impacting on the provision of quality services to citizens. Identified as a universal phenomenon that should be employed by two or more structures of government to improve cooperation in the provision of services by government structures and stake holders. Correspondingly, there are practical signs of poor intergovernmental relations as each of the three spheres of government functioned in silos, hence provision of water and sanitation challenges. The structural design of the intergovernmental model should be (re) developed to enforce synergies among the work of all water and sanitation role players accompanied by strong interplay of these water sector authorities that is not only transactional, but also relationally interfaced.

1.3 RESEARCH QUESTIONS

This study is informed by the subsequent research questions:

The following research question informs this study:

What is the institutional capacity of the Limpopo province's water and sanitation authorities in the delivery of clean freshwater and decent hygiene amenities to its communities?
What are the institutional capacity interventions required for restoring the situation to maximum capacity and capability, in order to enhance the delivery of and access to clean drinking water and sanitation?

The sub questions that follow are:

(a) What are the legislative frameworks and other policies linked to the implementation of water and sanitation in the district municipalities of the Limpopo province?
(b) What is the mandate of the Water and Sanitation Authorities in the Limpopo province in terms of providing freshwater services and decent public health to communities?
(c) What are the capacity constraints faced by the Water and Sanitation Authorities in the Limpopo province in the delivery of water and sanitation amenities to its communities?
(d) What are the possible effective capacity strategies for improving the provision of access to clean freshwater and decent hygiene to the affected communities in the Limpopo province?

1.4 AIM AND OBJECTIVES OF THE STUDY

The aim of the research inquiry is to examine the capacity and capability of the Limpopo Water Services Authorities in delivering access to clean freshwater and decent hygiene.

Here follow the specific objectives of the study:

(a) To assess the legislative frameworks and other policies linked to the implementation of water and sanitation in the district municipalities of the Limpopo province.
(b) To evaluate the mandate of the Water and Sanitation Authorities in the Limpopo province in terms of the provision of freshwater services and decent public health to communities.

(c) To explore the constraints faced by the Water and Sanitation Authorities in the Limpopo province in the delivery of water and sanitation amenities to its communities.

(d) To recommend possible effective strategies for improving the provision of access to spotless freshwater and decent cleanliness to the affected communities in the Limpopo province.

1.5 SIGNIFICANCE OF THE STUDY

The study has national and provincial relevance. The effective provision of consumption water and sanitation amenities are two of the main challenges confronting South Africa's public facility division since the state was ushered into a period of multiracial democratic governance, in 1994 (Kido, 2008:64). Therefore, the findings of this study attempt to assist the government in fulfilling its promise of delivery of proper consumption water and sanitation to all communities in the country. The findings also raise awareness regarding the constitutional rights of the public to clean water and proper hygiene practices, for their good health. Furthermore, the study informs the WSAs about their present status and the impact thereof on the communities; this may possibly speed-up the delivery of and access to elementary water services and sanitation facilities for destitute communities. The study recommends that the National Department of Water and Sanitation as well as the Department of Cooperative Governance, Human Settlement and Traditional Affairs (CoGHSTA) in Limpopo can also employ an inquiry into what standard in their oversight and enactment of water and sanitation schemes.

1.6. DELIMITATIONS OF THE STUDY

The delimitations are those attributes that regulate the capacity and delineate the restrictions of a study or research (Advanced Oxford English Dictionary, 2014). Although there is a need for improved water management throughout South Africa, this study is limited to Limpopo the province. The study is also delimited to the capacity of the boroughs in postulating their right to receive clean drinking water and decent sanitation within the WSAs. Furthermore, the study is also limited to all Water Services Authorities (WSAs) in the Limpopo province and will not be generalised. These Water Services Authorities are: Vhembe, Mopani, Sekhukhune and Capricorn District Municipalities, with the Polokwane Local Municipality in Capricorn and all

six Local Municipalities in the Waterberg District Municipality also serving as Water Services Authority, namely, Bela-Bela, Lephalale, Modimolle, Mogalakwena, Mookgobong and Thabazimbi (DWAF, 2006).

1.7. ETHICAL CONSIDERATIONS

Rationally, ethics are concomitant with decency and ethical guiding principles. It serves as a paradigm, which outlines the foundation for the inquiry in order to assess one's conduct (Babbie, 2007:118). The Faculty Panel of the University of Fort Hare guarantees principled consideration through the approval of the proposal. Ethics approval for all research conducted at the University of Fort Hare is sought from the GMRDC prior to the commencement of the study. Before the investigation commences, all respondents who are going to be involved in the study are asked to sign a consent form. In addition, they are made aware regarding the purpose and the standing of the research study to be conducted as well as their right to contribute willingly and or to withdraw from partaking in the study without suffering any negative consequences. The respondents in this study were assured of the confidentiality of their responses, and were informed that the names of the participating officials would remain undisclosed; in addition, the researcher indicated that he was obliged to treat all respondents with respect. The respondents were also guaranteed that the statistics will merely be employed for the findings of the investigation. Furthermore, no individual (except for those directly associated with the research) will have admittance to the transcripts statistics. The researcher is convinced that when the ethical considerations and due diligence are met, the respondents will feel free to proffer honest and full information, which is needed for this research.

1.8. STRUCTURE OF THE STUDY

This study consists of five (5) chapters.

Chapter One: Introduction and General Orientation

This chapter introduces and describes, in detail, the background to the study. The chapter further identifies all the role players who need to critically devote their strength towards delivering quality services. Furthermore, the statement of the problem, the research objectives,

significance of the study, delimitations, and ethical considerations guiding the study are placed into context in this chapter.

Chapter Two: Theoretical Exposition

Chapter Two conceptualises and contextualies the study, and it underpinned by the provision of a strong theoretical framework**.** Lessons are drawn from water and sanitation management in different countries in order to inform the institutional framework in South Africa.

Chapter Three: Research Design and Methodology

Chapter Three draws together the methods and approaches employed in this stud. More specifically, the chapter provides an outline of the target group, sampling methods, data collection and analytic techniques used in the study.

Chapter Four: Data Analysis

The research data of the study are presented in this chapter, through thematic and narrative data analysis. Moreover, particular case studies are explored in order to understand the depth of the problem.

Chapter Five: Conclusions and Recommendations

Conclusions based on the findings of the study are made informing the recommendations. This will include identifying areas for further research based on the conclusions made.

1.9. CONCLUSION

Even though there are critical directives, through policies and programmes, that ensure quality management, proper protection, usage, conservation, quality development and the efficient control of water resources as well as the provision of decent sanitation, accessibility cannot be faked or compromised. People in the Limpopo province require access to decent services in order to reinstate their self-esteem, therefore, this study makes a significant contribution to the realisation of this human right. Regardless of the purpose of the use of freshwater (be it

agricultural, industrial or domestic), the saving of water, the improvement of water management and the provision of proper sanitation is possible. Water is wasted almost everywhere and, as long as people are not facing water scarcity, they believe that access to water is an obvious and natural thing. As a result of urbanisation, the mushrooming of informal settlements, population increase and changes in lifestyle, water consumption and the demand for sanitation is bound to increase. Subsequent to huge backlogs in the provision of these services, this study explores the effects of the transformation process on the quality of access to water and sanitation services delivered by the WSA in the five District Municipalities of the Limpopo province in South Africa.

Therefore, this chapter introduced and described in detail the general orientation to the study and further identified all precarious prototype towards delivery of quality water and sanitation services to the citizens of Limpopo, as enshrined in the Constitution. The next chapter examines the concepts and contexts of the study, as underpinned by the strong theoretical framework for the study. Subsequently, lessons are drawn from water and sanitation management in different countries in order to inform the institutional framework in South Africa, especially that of the Limpopo province, within a local context.

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CHAPTER TWO

THEORETICAL EXPOSITION

2.1 INTRODUCTION

This chapter presents an outline and discussion of the key concepts relevant to this study, in addition to providing a description of the institutions involved in water and sanitation management in selected countries, in order to inform this study's analysis of the institutional framework in South Africa. It is for this reason that this chapter also provides a review of the current South African legislation pertinent to water and sanitation, as well as the regulations in the water and sanitation sector. A theoretical exposition is performed in order to understand institutional capacity challenges facing Water Services Authorities (WSAs) in their delivery of drinkable water and decent sanitation. Water and sanitation management has undergone major changes in the past two decades; in this time, integrated water and sanitation resources management and the adoption of catchment management as the appropriate level of water resources management have gained prominence across the world, alongside other recommendations adopted at major international meetings.

In this exposition, reflection is focussed on water and sanitation management in countries with a federal system of government and a comparable arid climate, given the semi-federal nature of government and aridity of the climate in South Africa. It is theorised that lessons that are more relevant can be drawn from the design of water and sanitation management institutions in such countries. South Africa has a three-tier system of government, which has significant implications for water management. Governments across the world are generally organised as two-tiered, three-tiered or four-tiered structures, with the last two structures generally prevalent in federal countries.

Environmental management (including water and sanitation) is still fragmented in the democratic South Africa despite the rhetoric of integration since 1994, when the apartheid era collapsed and the new democratic government made efforts to redress the imbalances of the

past. Governments across the world still have different departments (or ministries) responsible for the environment, natural resources, water and land; they also have a plethora of additional agencies dealing with various components of the environment. Water and sanitation is given a priority as it has an impact on the health of a country's citizens. As a means towards understanding water and sanitation management, intergovernmental relationships and cooperative governance structures across the world are discussed in this chapter.

Moreover, the chapter examines the relevant theory in respect of the water and sanitation landscape in order to understand the barriers to accessing water and sanitation in the Limpopo province in South Africa. The studies presented herein offer an overall historical perspective for the examination of the water and sanitation service delivery of WSAs. Consequently, the studies reviewed herein support this study's proposition that a combination of complex but weak institutions, poor policy guidance and political interference has resulted in the inadequate provision of and access to water and sanitation services within communities in Limpopo, South Africa. Thus, the immediate challenge that must be faced in bridging the knowledge gaps between water policies and services is a strong political commitment to policy implementation (Donkor, 20010:20), which prompts the need for further research on water and sanitation service delivery management.

2.2 DEFINITION OF KEY CONCEPTS

2.2.1 Capacity and capacity management

Capacity is a synthesis concept in that the meaning of it is derived from a combination of two words that describe the actual concept: "capsa" and "capere". Capsa means 'chest', and capere means 'to hold'. In Latin, the term means "chest with the ability to hold". From a manufacturing point of view, capacity is defined as the upper limit, or ceiling on the load, that an operating unit can carry. The operating unit might be a plant, department, machine, store or worker. The load can be specified in terms of either input or output and is a matter of preference or what the situation dictates (Lourens, 20010:11). Beassant, Brown, Lamming and Jones (2000) define capacity as the potential output of a system that is produced in a specific time. The output is

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however limited by the size, scale and configuration of the system's transformation inputs. About capacity within the service industry, the definition of capacity seems to remain the same in that practitioners view capacity as the highest possible amount of output that will be obtained in a specific period with a predefined level of staff, installation and equipment. The difference, however, is the way in which the entity is measured (Adenso-Diaz, Gonzalez-Torre and Garcia, 2002; Klasse and Rohleder, 2002; Bayou, 2001; Meredith and Shafer, 2002).

Adenso-Diaz et al. (2002) point out that no-one differs in this respect, although there was significant debate concerning the identification of a valid measurement of capacity, until the present measurement of capacity was initially developed in the industrial sphere. There is, however, a growing interest in the accurate and efficient measurement of capacity within the service sphere. From a service perspective, capacity management is the ability to balance the demand from customers and the capability of the service delivery system to satisfy said demand. From a functional perspective, capacity management provides practitioners with guidance on how to plan, justify and manage the appropriate levels of resources needed for a given solution. Improper planning for capacity can lead to wasted resources, which results in unnecessary cost, or a lack of resources, which leads to poor performance (Thacker, 2006; Ng, Whiz and Lee, 1999).

Several studies have shown that the available money is never enough to meet all the demands for healthcare services. Therefore, efficient resource allocation is required to obtain the best outcomes with the money that is available (Gross, 2004). Capacity management concerns finding the right balance between the demand of an operation and the ability to satisfy said demand with capacity.

2.2.2 Access to water and sanitation

Access to drinking water requires that a water source be less than 1 km away from its place of use, and that at least each member of a household per day (WHO, 2012) can reliably obtain 20 liters. Another issue, unaddressed by coverage data established by the JMP report and official

government reports, is that of consistency and sufficiency in accessibility. For an area to be considered "covered", a sufficient amount of water should be provided. In this regard, many localities in Pakistan report water only being available for a few hours a day, or only a few times a week; moreover, the water supply runs out and there is not enough for everyone. In urban areas, densification is increasing the demand for water (Ahmed, 2009:172). Furthermore, drinking water is considered safe when its microbial, chemical, and physical characteristics meet WHO Guidelines for Drinking Water Quality (WHO, 2012). These guidelines describe the minimum requirements to protect the health of consumers and provide indicators of water quality.

In Karachi, for example, only 5% of houses have twenty-four/seven access to water (Padawangi, 2010:11). This is a major driver for the existence of an informal water sector. The absence of piped water supply is not the only circumstance in which communities resort to their own 'alternative arrangements'; rather, "insufficient supply, disconnection of service, poor quality water, unreliable frequency and unpredictable timing of supply" are all reported as major reasons for the necessity of informal approaches (i.e. approaches that fall outside of those provided by the municipality) (Padawangi, 2010:11). However, informal approaches often do not yield potable water. Moreover, due to leakage and theft, the water supplied is often less than the water received; in some areas, 35% of the water is lost due to these issues (Ahmed, 2009:174).

Access is not equitable across the population of Pakistan. There are cases of households using drinking water for other purposes (e.g. gardening). This practice leaves less drinking water available to other members in a supply area, and forces people to buy water at higher prices or causes them to travel longer distances to acquire it (Nawab and Nyborg, 2009:588). Nawab and Nyborg report that the water supply department attributes these inequalities to their lack of legal power to monitor such behaviour (2009:588). This finding justifies the need for a better WSS institution. In addition, some areas demonstrated that improved everyday access to water supply helped facilitate sanitation adoption (O'Reilly and Louis, 2014:49).

By definition, basic sanitation techniques ensure hygienic waste disposal and a clean and healthy living environment, in both the home and the surrounding neighbourhood (WHO,

2012). Access to basic sanitation includes the safety and privacy of these services, while sanitation coverage is defined as the proportion of people using improved sanitation facilities (UNICEF and WHO, 2008). In 2008, WHO introduced a new four stepladder to assess global, regional and national progress on sanitation coverage (UNICEF and WHO, 2008). In observing sanitation adoption on its own, scholars strongly advocate for deeper cultural and social engagement. In 2011, the Indian WASH Forum proposed the following: "If the toilet construction is not as per the choice of and need of the community, if it is done as a contracted out process, not just the technology, but the desirability, location, and several other factors leading to usage will be compromised." Merely putting toilets in communities does not solve open defecation. Behaviour and hygienic habits must be changed, therefore, a socially minded approach is merited (O'Reilly and Louis, 2014:49).

Populations are grouped into one of four categories based on available waste elimination sites: open defecation (e.g. field, forest and bush), unimproved sanitation facility, shared sanitation facility, or improved sanitation facility. Eliminating open defecation is especially important because this practice, by even a few community members, can increase the risk of an entire community's susceptibility to waterborne illnesses. Unimproved sanitation facilities do not ensure the hygienic separation of human excreta from human contact; this includes pit latrines without a slab or platform, hanging and bucket latrines, and pour flush toilets that discharge directly into open bodies of water. Shared sanitation facilities, used by 37% of the Kenyan population, are used by two or more households, and include public toilets. Improved sanitation facilities are facilities that ensure the hygienic separation of human excreta from human contact and include flush or pour flush toilets/latrines, ventilated improved pit latrines, pit latrines with a slab, and composting toilets (UNICEF and WHO, 2008).

2.2.3   Service delivery

"Service delivery" is a common phrase in South Africa; it is used to describe the distribution of basic resources upon which citizens depend, such as water, electricity, sanitation infrastructure, land, and housing. Unfortunately, the government's delivery and upkeep of these resources is unreliable, thus, greatly inconveniencing or endangering whole communities

(Chen, Dean, Frant and Kumar, 2014). According to Nleya's interpretation of service delivery, there has been a tendency on the part of academics, politicians and media practitioners to use the term 'service delivery protests' causally to describe the local protests that have occurred across the length and breadth of South Africa. The mere use of the phrase 'service delivery protest' implies the existence of a relationship between the protest and service delivery. In addition, the term 'service delivery' in itself is not neutral (Nleya, 2011:4).

Harber (2009), for example, points out that "sometimes one word or phrase captures a time and an issue. Often, it is a phrase one uses so often and with such ease that one no longer hears the meanings hidden in it." For Harber (2009), the phrase 'service delivery' needs to be taken apart in order to understand its hidden meanings. Nleya (2011:5) notes that: "It contains a host of assumptions, policies, attitudes and promises – which are starting to haunt a government which has built its promise entirely on the notion of improving service delivery. They did not promise better opportunities, better access or better support in getting services, as these did not make ringing election slogans. They promised delivery, simple and straightforward."

Furthermore, Harber (2009) sees the use of the phrase as part of a 'technocratic' description of the relationship between citizens and the government. Thus, the government delivers while citizens receive. For Harber, the term has become part of a major linguistic and conceptual conundrum. Yet, it would be misleading to say that the phrase is a South African invention or monopoly; for example, in its 2004 World Development Report, the World Bank uses the phrase time and again (World Bank, 2003). While the report recognizes that there exists no template for successful service delivery, it still places the overall responsibility of 'making services work for poor people' on the state (World Bank, 2003). Given the capital intensity, which leads to monopolistic behaviour in the production of basic services for the poor, and the externalities associated with their provision, government involvement is often crucial in financing, regulating and overseeing these services.

Therefore, Harber's (2009) exposition is still relevant as technocratic 'service delivery' sidelines citizen input and undermines the possibility of citizens understanding the inherent

intricate balancing acts of public policy formulation and implementation. Public policy inherently involves value maximization within constraints and decision makers in service provision would have to decide what constitutes an acceptable level of access, quantity and quality, and ascribe a different weight to each of these three components of the service delivery matrix. Citizen involvement at that level of decision-making increases buy-in into government policies and ensures that citizens understand the constraints within which service delivery occurs.

The service delivery approach (SDA) is a conceptual ideal of how water services should be provided. It is rooted in the shift in focus from the means of service delivery (the water supply systems or infrastructure), towards the actual service accessed by users, where access to a water service is described in terms of a user's ability to reliably and affordably access a given quantity of water, of an acceptable quality, at a given distance from her or his home. A water service therefore consists of the hard and soft (physical and other infrastructure) systems required making this access possible (Butterworth, 2010:2). A key assumption of this approach is that, in a given context, the principles behind the SDA should be applied through the agreed upon service delivery models (SDMs). SDMs provide agreed upon frameworks for delivering services. An SDM is developed within the parameters of a country's existing policy and legal frameworks, which define the 'norms and standards for rural water supply; roles, rights and responsibilities; and financing mechanisms'. At the intermediate level, an SDM can articulate the provision of the service to an entire population in a given area usually served by a variety of systems. In a country, or even within a single decentralised or intermediate level administrative unit, there are several SDMs, which are often related to the management models recognised in a particular policy framework (Butterworth, 2010:2-3).

2.2.4   Clean drinkable water

Water quality parameters, or clean drinkable water, is defined as having acceptable quality in terms of its physical, chemical, bacteriological parameters so that it can be safely used for drinking and cooking (WHO, 2004). WHO defines drinking water as safe if, and only if, it

poses no significant health risks during the lifespan of the scheme and when it is consumed. The current study focuses on water quality for drinking and domestic use.

The World Health Organisation released the third edition of Guidelines for clean drinkable water in 2004. The WHO Guidelines are addressed primarily to water and health regulators, policy-makers and their advisors, in order to assist in the development of national standards and practices. Included in these guidelines are: a preventive management "framework" for safe drinking water, including health-based targets; risk-based water safety plans; operational monitoring; and independent surveillance. In addition, extensive information is provided on microbial, chemical, and radiological hazards (including risks, detection, assessment and treatment). The WHO Guidelines are accompanied by a series of fact sheets and publications providing information on the assessment and management of risks associated with microbial hazards, and by internationally peer-reviewed risk assessments for specific chemicals (WHO, 2004).

In terms of drinking water quality, user perception is one of the most important aspects thereof, sometimes exceeding actual quality of water, especially when it concerns the quality of drinking water for user communities (Sheat, 1992; Doria, 2010). There are different factors that influence the perception of drinking water quality, including:

- Human sensory perceptions of taste, odor and color of water are related to mental factors. To some extent, taste is more important than the other sensory factors because it may detect water contamination related to chemicals.
- People perceive risks if they experience health problems caused by water.
- Some perceptions are related to experiences with the previous status of a water source, based on its taste, color and odor change, for example, a change in the color of water from yellowish to bluish will lead to the perception that the water is not good water (Doria, 2010).
- Information plays a significant role in changing people's perceptions of water source behavior. Whether this information is disseminated from person-to-person or with the use of media (like newspapers, brochures, etc.), in rural and poor urban areas, interpersonal information is important.

Bacteriological parameters - the diseases caused by water related microorganisms can be divided into four main categories:

- Water-borne diseases: These diseases are caused by water that has been contaminated by human, animal or chemical waste. Examples of these diseases include cholera, typhoid, meningitis, dysentery, hepatitis and diarrhea. A host of bacterial, viral and parasitic organisms, most of which can be spread by contaminated water (WHO, 2006), causes diarrhea. Poor nutrition resulting from frequent attacks of diarrhea is the primary cause for stunted growth in millions of children in the developing world (Gadgil, 1998).

- Water-related vector diseases: These are diseases transmitted by vectors, such as mosquitoes, that breed or live near water. Examples of these diseases include malaria, yellow fever, dengue fever and filariasis. Malaria causes over one million deaths a year alone (WHO, 2006). Stagnant and poorly managed waters provide the breeding grounds for malaria-carrying mosquitoes.

- Water-based diseases: Parasitic aquatic organisms referred to as helminths cause these diseases, and can be transmitted via skin penetration or contact. Examples of these diseases include Guinea worm disease, filariasis, paragonimiasis, clonorchiasis and schistosomiasis.

- Water-scarce diseases: These diseases flourish in conditions where freshwater is scarce and sanitation is poor. Examples of these diseases include trachoma and tuberculosis.

Testing the bacterial contaminants in water can be simplified by utilizing the presence of an indicator organism. An indicator organism does not necessarily pose a health risk, but it can be easily isolated and enumerated, is present in large numbers, is more resistant to disinfection than pathogens, and does not multiply in water and distribution systems (Gadgil, 1998).

Traditionally, total coliform bacteria have been used to indicate the presence of fecal contamination; however, this parameter has been found to exist and grow in soil and water environments and is therefore considered a poor parameter for measuring the presence of pathogens (Stevens, Ashbolt and Cunliffe, 2003). Studies also show that due to their ability to grow in drinking water distribution systems and their unpredictable presence in water supplies

during outbreaks of waterborne disease, the sanitary significance or quality of water is difficult to interpret in the presence of total coliforms (Stevens et al., 2003).

An exception to this is Escherichia coli (E.coli), a thermotolerant coliform that is the most numerous of the total coliform group found in animal or human faeces, which rarely grows in the environment and is considered the most specific indicator of faecal contamination in drinking water (WHO, 2004). The presence of E. coli provides strong evidence of recent faecal contamination (WHO, 2004; Stevens et al., 2003). The risk of coliform presence can depend on the health or sensitivity of the consumer. The risks of E. coli presence, slightly greater than WHO Guideline's zero count per 100ml is of only low or intermediate risk. According to IRC, 2002; and WHO, 2004, some of the main chemical parameters that constitute a health concern include the following:

- Fluoride causes mottling of teeth and, in severe cases, can result in crippling skeletal fluorosis.
- The presence of arsenic implicates the risk of cancer and skin lesions.
- Nitrate can cause methaemoglobinaemia; this arises from excess fertilizers or leaching of wastewater and other organic wastes into the water surface.
- Lead can have adverse neurological effects, mainly in areas with acidic waters and the use of lead pipes, fittings and soldered pipes.

A secondary concern regarding the impact of chemical constituents is their effect on distribution and treatment systems that are implemented to improve access to a safe water supply. The corrosive properties of constituents can induce structural failure, which can also result in the deterioration of the water quality and could cause additional health and safety concerns. Due to these concerns, corrosion control is an important aspect of the management of a drinking water system. The pH can control the solubility and reaction rates of most of the metal species involved in corrosion reactions (WHO, 2004).

Iron, lead, copper, brass and nickel can also be used in the construction of piping systems (WHO, 2004). Concrete is a composite material consisting of sand, gravel and cement; it is a binder consisting primarily of calcium silicates, aluminates and some lime (WHO, 2004). The structural deterioration or failure of cement that results from prolonged exposure to aggressive

or highly corrosive waters can result in the leaching of metals from the cement into the water (WHO, 2004).

When ferrous iron oxidizes to ferric iron, it can give the water a reddish-brown colour, which could be aesthetically displeasing (WHO, 2004). Manganese can cause an undesirable taste and it could stain laundry when its levels exceed 0.1 mg/liter. The presence of manganese also leads to the accumulation of deposits in the piping system (WHO, 2004). There is no health-based guideline value set for iron; however, for manganese, it is four times higher than the acceptable threshold of 0.1 mg/liter (WHO, 2004).

In terms of the physical and aesthetic parameters, consumer perception and acceptability of drinking water quality depends on the user's sense of taste, odour and appearance (Sheat, 1992; Doria, 2010). That is why consumers have differing opinions regarding the aesthetic values of water quality. Relying on their own senses may lead to the avoidance of highly turbid or coloured, but otherwise safe waters, in favour of more aesthetically acceptable but potentially unsafe water sources (WHO, 2004).

Taste and odour can originate from various natural chemical contaminants, biological sources, microbial activity, corrosion or because of water treatment (e.g. chlorination) (WHO, 2004). Colour, cloudiness, particulate matter and visible organisms can also contribute to the unacceptability of water sources. These factors can vary for each community and are dependent on local conditions and characteristics. The following list provides a number of primary aesthetic indicators that can cause water to be perceived as unacceptable:

- True color (the color that remains after any suspended particles are removed);
- Turbidity (the cloudiness caused by particulate matter present in source water, the suspension of sediment in the distribution system, the presence of inorganic particulate matter in some groundwater or sloughing of bio-film within the distribution system) (WHO, 2004);
- Unusual taste, odor and feel problems (usually due to total dissolved solids).

Turbidity is the most important problem related to the aesthetic value of water quality; although it does not necessarily adversely affect human health, it can protect microorganisms from disinfection effects, can stimulate bacterial growth, and could indicate problems with treatment processes (WHO, 2004).

2.2.5 Decent sanitation

The definition of access to improved or decent sanitation differs somewhat across countries and regions. Some countries count ordinary pit latrines as adequate sanitation, while others count only ventilated improved pit (VIP) latrines and/or flush toilets connected to a septic tank or a sewerage system as adequate sanitation (UNICEF, 2001:2). Pit latrines are adequate for rural communities, but are not appropriate for urban areas. Therefore, more urbanized countries such as Argentina and Brazil, record only flush toilets as adequate and report lower rates of access than poorer countries such as Kenya and Tanzania (WHO, 2000:14). The WHO/UNICEF joint monitoring programme was established in 1990 to help countries strengthen water and sanitation data collection. Generally, country definitions have since become more restrictive and realistic, thus resulting in reports of lower rates of access. Just as many countries need to increase their efforts to improve access to sanitation, greater standardisation of definitions is needed to allow for more accurate global comparison of progress.

Sanitation is regarded as the maintenance of sanitary conditions. Therefore, basic sanitation means the provision of sufficient hygienic, hazard-free toilets, the effective removal and disposal of household waste, and effective effluent disposal (Pietersen, 1997:14). Good sanitation is important for a number of reasons, especially human dignity; moreover, poor sanitation has an impact on various areas of social development.

Lack of access to safe sanitation facilities is a significant cause of ill health in South Africa (Evans, 1994:130). Poor sanitation promotes the spread of health problems. Many human infections are spread through inadequate sanitation; for example, viruses, bacteria, protozoa

and worms are spread through direct contact, indirectly via carriers and vectors. In addition, cholera deaths are an indication of a poor health system and poor sanitation (Hall, 2003:19). Poor sanitation affects the health, quality of life, and development potential of communities. The Water Services Act (RSA, 1997:13) mentions that diarrhoea is the leading child-killer disease amongst South African children. Poor sanitation is a major cause of diarrhoea. The White Paper on Basic Household Sanitation (RSA, 2001:7) affirms that adequate basic household sanitation facilities can have dramatic health benefits for communities.

Inadequate sanitation, through its impact on health and the environment, has implications for economic development (UNICEF, 2001:12). People absent themselves from work due to excreta-related diseases. Poor health keeps families in a cycle of poverty and leads to a loss of income. The national cost of productivity, reduced education potential and curative health care is substantial. One estimate puts the cost of health expenditure at R3.5 billion per year (RSA, 2000:8). The increasing pollution of rivers and shorelines negatively affects upon businesses such as tourism and agriculture, which are vital to the nation's economic growth. Lack of excreta management also poses a fundamental threat to global water resources. The White Paper on Basic Household Sanitation (RSA, 2001:9) highlights the benefits of improving sanitation: reduced morbidity and increased life expectancy, savings in health care costs and reduced time for caring and sick leave (i.e. healthy staff return to work).

Sanitation systems involve the disposal and treatment of waste. An inadequate sanitation system constitutes a range of pollution risks to the environment, especially the contamination of surface and ground water resources. This, in turn, increases the cost of downstream water treatment as well as the risk of disease for people who use untreated water. According to The White Paper on Basic Household Sanitation (RSA, 2001:8), the effects of pollution include: waterborne diseases, blue baby syndrome in bottle-fed infants, excessive growth of aquatic plants which are toxic, and the depletion of oxygen in water.

Eade and Williams (1995:688) emphasise that sanitation is vital in primary health care. They further state that over 25 million people die every year from diseases related to inadequate and

poor sanitation. Inadequate sanitation has been identified as the main cause of human illness. The most common diseases associated with poor sanitation are: diarrhoea and dysentery, typhoid, bilharzia, malaria, cholera, worms, eye infection and skin diseases. Contaminated water and poor hygiene are the major cause of diarrhoea diseases, the most common group of communicable diseases, which are highly prevalent amongst poor people living in crowded conditions with inadequate facilities (Blackett, 2001:29). Most faecal–oral infections are transmitted via the hands and during food preparation, rather than through drinking contaminated water directly. There are major routes of disease transmission, which can include the following: transmission via fingers and hands, that is, contamination by faeces through unwashed hands. The second transmission route is faecal contaminated food, which has been prepared by unwashed hands or grown in contaminated soil. The third transmission route is through flies. The fourth transmission route is through fluids; this is mainly water pathogenically contaminated at source or during collection, transportation or storage. The fifth transmission is through fields, people working in fields, or children playing where pathogens are present.

2.3 THE THEORY UNDERPINNING THE STUDY

The theoretical framework underpinning this study is Calpin's Theory of True Access within the context of sustainable development, as discussed in this section of the chapter.

2.3.1 Theory of True Access

This study is also grounded in the theory of true access. According to Ribot and Peluso (2003), a genuine access investigation emphasises a philosophy of right to use that interchanges the liberty base outset on stuff or the corporeal concepts of material goods itself. Genuine access seeks to ascertain and exploit devices of importance in escorting the philosophy's solicitation on precise circumstances (Calpin, 2010:36). In applying Ribot and Peluso's (2003) all-encompassing interpretation of right to use, which embraces the significant conception of a user's capacity to profit, the researcher seeks to institute a hypothetical degree of true access.

Ribot and Peluso's (2003) theory of access is largely based on the abilities that people utilise in order to benefit from access, including material objects, persons, institutions and symbols.

Access, therefore, depends on 'bundles of power', which individuals hold; these are seen as the means by which actors gain, control and maintain access to resources. In the access approach, these abilities, or 'bundles of power', can be equated to endowments (i.e. entitlements approach) that people would need to possess in order to benefit (from resources) and to avoid starvation (by commanding food). Ribot and Peluso (2003) explain the matter as follows: "Different people and institutions hold and can draw on different 'bundles of power' located and constituted within 'webs of power' made up of these strands. People and institutions are positioned differently in relation to resources at various historical moments and geographical scales. The strands thus shift and change over time, changing the nature of power and forms of access to resources.

This study adopts the notion of access articulated by Ribot and Peluso (2003), which focuses on the ability to "benefit from things" and not just on the various rights that people have in relation to resources. Here, by focussing on abilities, this notion draws attention to a range of possibilities and activities, termed 'mechanisms of access', which are drawn on in order to benefit from certain natural resources. Other processes, such as governance, influence these abilities (whether enabled or hindered). Ribot and Peluso (2003) distinguish between the different types of mechanisms that influence access and how individuals draw on and engage with these mechanisms in order to benefit. To conclude, a preliminary conceptual framework of access that draws on Ribot and Peluso's (2003) ideas, but also seeks to enhance weaknesses in their approach, is presented and briefly discussed below.

2.3.2   Mechanisms of access

In Ribot and Peluso's (2003) access framework, a distinction is made between two sets of mechanisms: the first concerns mechanisms based on 'rights-based access' (direct elements of access), including 'illegal' access, which is sanctioned by law, custom and convention. The second relates to 'structural and relational mechanisms of access' (indirect elements of access), which include access to technology, capital, markets, labour, knowledge, authority, social identity and access through the negotiation of other social relations. The 'direct' and 'indirect' elements are seen as the first and second levels in the ability to benefit.

2.3.3   Direct mechanisms

The direct elements in the access framework represent physical access obtained through 'extra-legal' measures; this is seen to represent access gain. As access is usually understood in terms of rights, it should be noted that benefits from resources are derived, in some instances, even where no rights exist. These acts or the enjoyment of benefits where no formal rights exist, are referred to as the extra-legal elements of access (Ribot and Peluso, 2003). This encompasses access obtained through illegal mechanisms, including intimidation and theft. However, as Ribot and Peluso (2003) explain, access gained 'illegally' is a form of direct access based on the sanctions of custom, convention and law. Illegal access can also occur through coercion (i.e. force or the threat thereof) and stealth, consequently shaping relations amongst those attempting to gain, control or maintain access. Thus, access can be controlled illegally through these means and people can illegally maintain access by establishing relations with or by posing counter threats to those who control access.

In South Africa, this type of access is often ascribed to informal activities, which determines that individuals and communities benefit from resources via means deemed illegal in terms of management or state rules. According to Kepe (2008), these informal activities override formal forms of access (via human rights) and allow people to gain access to land and resources from which they would otherwise be excluded. These scenarios, according to Kepe (2008), "are common in areas where land is designated as belonging to the state i.e. forests or nature reserves and people from the neighbouring areas often 'illegally' treat these as de facto common property". However, criminality is a matter of perspective and is subject to different interpretations (Hauck, 2009; Kepe, 2008). As people claim poverty and struggles, according to Myburgh (2008:15-17), the theft of generators and water pumps, as well as the vandalism of water pump valves, regularly result into most rural areas going without water for weeks, as is evident in Mankweng Township of Polokwane Local Municipality. While in Louis Trichardt, residents had no water for one entire day after cables at the pump station at Albasini dam were stolen (Myburgh, 2008:3).

The legislative framework further highlights that an understanding of compliance behaviour first requires a critical analysis of the law, its history and the power dynamics that have shaped it. The political underpinnings and injustices of the past, therefore, raise serious concerns

regarding issues of access rights, which continue to be contested in water and sanitation (service delivery) management in South Africa (Hauck, 2009; Hauck and Sweijd, 1999).

2.3.4   Indirect elements of access

As rights-based mechanisms of access are defined as direct elements of access, indirect elements comprise of a range of strategies and processes that play a role in acquiring and maintaining access to resources. These, according to Ribot and Peluso (2003), include access to technology, labour, capital, markets, knowledge, authority, social identities and social relations. Therefore, it is arguable that these mechanisms are not absolute and, in different contexts, are determined empirically. However, Ribot and Peluso (2003) present some of the most common mechanisms that typically appear where people make use of natural resources in order to benefit. These are briefly unpacked below.

Access to technology is seen as a key feature in instances in which technology is required to extract or convert natural resources. For example, in order for a farmer to till his land and benefit from the sale of his harvest, access to equipment is needed for the extraction, conversion and transportation of the harvest to available markets. The use of technology, however, is for the purpose of not only conversion or extraction, but also serves to facilitate access and benefits. Furthermore, access to technology and capital can be seen as interlinked: as capital makes technology more accessible to individuals, which inevitably makes a person's ability to benefit more favourable. Access to capital also means that individuals have more bargaining power, that is, they could even be in a position to benefit from resources to which they have no actual rights, and could be in a better position than those who do not have access to capital. In Ribot and Peluso's (2003) access framework, it is noted that access to capital can even help to buy influence over people who control access, and it can be used to maintain access by paying access fees or rental.

Access to authority is seen as an important juncture in the web of powers that enable people to benefit from things (Ribot and Peluso, 2003). Those in a position to mediate others' access, and those responsible for making and implementing laws governing access, can strongly influence who has access and who does not. Legal, customary and conventional authorities

could also compete or be in conflict and have overlapping jurisdictions of authority over resources or areas. In these scenarios, individuals who are able to draw on any legal jurisdiction are able to progress in terms of their access and benefits. This could be seen as similar to 'forum shopping' within legal pluralism, where individuals make use of the most favourable option in a given situation to ensure a positive outcome (Meinzen-Dick and Pradhan, 2002).

Access through social identity is often mediated via membership of a community or group (Ribot and Peluso, 2003). Other attributes that constitute social identity include ethnicity, religion, party membership, status, place of birth, and the histories related to all of these. These attributes could result in some individuals being subjected to formal law, while others are exempt based on their exhibited social attributes. This are evident, for example, in instances in which community leaders, councillors and village chiefs, who also control resources, allocate access along identity lines (Ribot and Peluso, 2003). While an identity is used as motivation for claiming access, in some instances claimants (who are not part of the community group) who are less able to harness this mechanism in order to claim or gain access could use other mechanisms, such as access to capital, or markets, or authority in order to gain access. This could result in competition and conflict between claimants. Another example prevails in that rights and claims are either attached or explicitly detached from particular localities, which could see local users who want to access resources for extraction purposes being totally excluded from resource areas (Neumann, 1998; Ribot, 1995).

Furthermore, identity-based access could result in 'outsiders', such as scientists and donors, having access to controlled access areas, including nature reserves and water catchment areas, as well as having the means to fast-track water services and sanitation. Membership of a scientific group or institution entitles individuals to privileged or exclusive access for the purpose of carrying out research, derived from their access to authority (government permission) and capital (e.g. donor funds) (Ribot and Peluso, 2003). In such scenarios, science-based forms of knowledge and research results have been known to have a greater influence in decision- and policy-making, and are deemed more legitimate than those knowledge forms derived from local resource users. This, according to Ribot and Peluso (2003), influences local users' relative abilities to maintain access and control over resources.

Access via the negotiation of social relations is seen as akin to identity and is central to virtually all other elements of access. Berry (1989) proposes that access also hinges on individuals' abilities to participate in various social relations. She adds that "since access to resources depends, in part, on the ability to negotiate successfully, people tend to invest in the means of negotiation which in other words could imply that people would find ways to actively participate within social relations in order to benefit from resources" (Berry 1993:15). Berry's (1993) analysis stresses the importance of the development of economically based ties, in addition to other identity-based relationships, as a means of being included or excluded from certain kinds of resources and associated benefits (Berry, in Ribot and Peluso, 2003). In addition, indirect mechanisms of access can be viewed as forms of social relations. Ribot and Peluso (2003) note that understanding the multiplicity of ways that people are able to benefit is key to understanding the complexities of resource access.

This study is grounded in theory for the South African regime's slow and unsatisfactory progress towards creating a fundamental means of access, in addition to the ability of those in power to manipulate a client's authentic capability to constantly profit from water wherewithal. In being acquainted with this, the researcher seeks to describe an alternative gauge of access, identified as true access (Calpin, 2010:34). This alternative gauge will integrate the concept that access is an extra compound in addition to the lawful standing to a service or the material goods from which on is able to profit (Calpin, 2010:34). Ribot and Peluso (2003) encompass a large amount of the hypothetical framework for access scrutiny, upon which the theory will be constructed by the researcher. The researcher will apply this theory to the preferred cases, within the ambit of the Water Services Authorities. The intention of this application is to scrutinize deviations that involve local government spheres, with reference to a client's genuine access to freshwater amenities, and the outcome of the upshot for impact of administration models on the client's genuine access. Any such enquiry ought to be exploited in order to advance an unblemished portrait of how populations benefit, influence and uphold uninterrupted profits from municipal amenities (Calpin, 2010:36).

Therefore, the scrutiny of true access is, in turn, employed in evaluating the regime's accomplishments and breakdowns in supplying municipal services for its consumers. On the contrary, making use of true access scrutiny emphasises administration and elected officials amongst the compound network of authorities and associations external to the command of

municipal guidelines that might persuade one civilian to benefit from the legal parameters to access basic services without any struggle or applying any pressure to service providers.

Access theory suggests that organisational development and survival is attained when managers and all stakeholders appreciate the functions of organisations, the quality of decisions taken, and understand individual as well as group behaviour, which motivates them to improve service delivery.

2.3.5   Capacity and capabilities of water services authorities

According to a global study conducted by Pahl-Wostl (2002:394), in Germany, the WSA or the Water Service Sector is currently undergoing major processes of transformation on a local, regional and global scale. A study conducted by Frone (2008:293) clearly outlined that one of the specific objectives of the Romanian government has been to provide water supply in line with the practices and policies of the European Union (EU) in most states by 2015, and by developing efficient regionalized water management structures.

Furthermore, a study by Montgomery and Elimelech (2007:22) indicates that, in many developing countries internationally, government and the Water Sector's lack of accountability, corruption, inefficient management, lack of personnel and difficulty in enforcing set standards creates a situation in which water and sanitation do not receive due attention. A study in Romania showed that the government and its Water Sector lack experienced staff, have an inappropriate institutional framework, and those roles and responsibilities remain unclear, effectively leading to inefficient management. Another study, conducted in Buenos Aires by Hardoy and Schusterman (2000:67), mentioned that the failure Water Sectors to extend water and sanitation services was due to the lack of appropriate social policies and the lack of proven models.

On the African continent, for example, the Water Sector in Benin has made slow, but steady, progress in developing its water supply and sanitation sector. The government has found

significant success in expanding coverage under a clear development framework, particularly in rural areas. Benin is currently revising its national water policy to include a strategy for sanitation, to promote integrated water resource management, and to further create a regulatory agency with oversight over water and sanitation service provider delivery standards (USAID, 2007:1). Based on a study conducted by Diemand, Geddes, Kalauskas and Ridley (2010:2), the Namibian government has attempted to mitigate problems in the water sector by devising various water policies that outline everything from the proper testing of water supplies to the investigation into new government structures in order to improve the capacity of water management.

Moreover, Parker's (2009:8) study in Naivasha in Kenya detected that the government does not have a plan for water and sanitation, and that developing one is unlikely to become a priority in the foreseeable future; the study also indicated that, in Lusaka, the government has limited capacity to facilitate water and on-site sanitation. Another study, conducted by Telmo (2002:95), mentioned that, in Mali, the government's lack of financial means was identified as the main obstacle to the improvement of water supply and sanitation. Hence, a research conducted by Mehta and Mehta (2008:45) revealed that in many African countries it was a common practice for NGOs to fund investments directly, thus bypassing local government budgets. These practices affect local government control and, combined with the lack of reliable and transparent information, make it difficult for local government to plan and budget efficiently. Therefore, Water Services Authorities in most African states lack the necessary personnel as well as the institutional capacity and capabilities to provide water and sanitation to their citizens.

According to a study conducted by Guerquin, Ahmed, Ikeda, Ozbilen and Schutterrlaar (2003:80), the South African government has been putting in place a comprehensive water policy framework since 1994, in order to define its priorities for water management and to develop a local and national financing solution. The national government is committed to eliminating the backlog in basic water services and sanitation; the first step in this direction was the provision of, at the very least, basic water and sanitation services to all people living in South Africa.

Furthermore, focus is directed to institutional competence, capacity and performance as important determinants of water and sanitation infrastructure provision and management in South Africa towards its citizens (Saleth and Dinar, 2005; World Bank, 2010; Karar, Mazibuko, Gyedu-Ababio and Weston, 2011; Van Koppen and Schreiner, 2014). This seems obvious, however, systematic analysis has been lacking in respect of the nature and extent of the links between stronger institutions and better outcomes; specifically, broader access, higher service quality, and financially efficient services. There has also been new thought around the options for institutional reform and governance regarding water in South Africa, specifically in terms of how large water infrastructure projects will be developed, managed, operated and maintained (RSA, 1997; DWAF, 2004, 2007; DWA, 2013; RSA, 1998; Ruiters, 2013). The Department of Water Affairs (DWA) has recognised that the institutional frameworks require modification and has set up a project that should cover the 184 institutions involved, that is, water service providers, water agencies, water-user associations, and water services authorities (DWA, 2012b). A number of institutional options are used for the development and management of water infrastructure, that is, dams, large raw-water conduits such as tunnels and canals, as well as distribution and reticulation networks (DWA, 2012b, 2013). These factors related to institutional development and performance are listed in table 2.1, below.

Table 2.1: Institutional development and performance

Water Service Institutions	Responsibilities
Water boards (bulk water services providers)	3 The Minister of Water Affairs and Forestry establishes a water board. 4 The primary function of a water board is to provide water services to other water service institutions. 5 Water boards may carry out secondary activities as long as they do not interfere with the primary function of supplying other institutions, or create financial problems for the board. Secondary activities of a water board may include: - providing management services, training and other support services - supplying untreated water to end users who do not use the water for household purposes - providing catchment management services, with the approval of the water services

	authority - supplying water directly for industrial use - accepting industrial effluent - acting as a water service provider to consumers - performing water conservation functions.
	6 A water board is a public water service provider.
Water Services Authorities - Municipalities (District municipalities and those local municipalities permitted by the minister to serve as water services authorities)	▪ A Water Services Authority is any municipality that has executive authority for water services within its area of jurisdiction in terms of the Municipal Structures Act or the ministerial authorisations made in terms of the Municipal Structures Act. This means that the municipality is responsible for ensuring access to water supply and sanitation services. ▪ A Water Services Authority is a municipality and cannot be any other type of institution. ▪ A Water Services Authority can be a Category A (Metropolitan), or Category C (District) municipality, or a Category B (Local) municipality, if authorised by the Minister of Provincial and Local Government. A water services authority has a choice: it may carry out the functions of a water service provider itself or it may enter into a contract (service delivery agreement) with another water service provider.
Water Service Providers	▪ The water service provider physically provides the water supply and sanitation services to consumers under contract to the Water Services Authority. ▪ The municipality itself or any other public or private body, such as a water board, a non-governmental organisation (NGO), a community-based organisation (CBO) or a private sector company, with whom it contracts, can perform this function. ▪ No person may operate as a water service provider without the approval of the Water Services Authority or by means of a contract/service delivery agreement. (DWA, 2012b, 2013a)

Source: Overview of the South African Water Sector (DWA):n.d:27

Furthermore, these institutions lie within the ambit of different government departments and different spheres of government (national, provincial and local). The arising relationships therefore tend to be complex in nature. In addition, several non-state actors, including civil

society organisations, are involved formally either as per legislation or as lobby groups. Since the different levels of government are constitutionally mandated to carry out certain functions in their jurisdiction, interaction is constrained by this protection. However, the Constitution of the Republic of South Africa (RSA, 1996) engenders the spirit of cooperative governance amongst all state actors. In fact, the National Environmental Management Act (RSA, 1998b) and Water Services Act (RSA, 1997b) provide for cooperative governance in recognition of these constitutional obligations. There are compelling reasons why systems need to be established to facilitate interaction between institutions in the water sector. Firstly, many of the institutions envisaged in the new legislation are still in their formative stages. Secondly, there are differences of hydrological and resource endowments of different catchments, hence, a single system is neither desirable nor efficient. Thirdly, there are several areas in which jurisdictions overlap, which means that their respective duties need to be clarified in order to avoid duplication and/or a lack of accountability.

Mazibuko and Pegram (2004) argue that co-operation is critical to the effective and efficient development, management and implementation of policy, particularly where institutions have shared interdependent or related responsibilities. A system of institutional arrangements needs to be developed without compromising any institution's mandate, function and powers. Government departments in South Africa are constitutionally mandated to work collectively and avoid duplication, however, in practice, very often lines are still drawn between departments and sometimes within departments (Van Koppen, Smits, Moriarty, Penning de Vries, Mikhail, and Boelee , 2009.). The Department of Water Affairs and Forestry is mandated to act on behalf of the state as the custodian of all water resources in the Republic. The Local Government: Municipal Structures Act (RSA, 1998a) provides for the provision of water services to be the responsibility of local governments in the long term. The Constitution (RSA, 1996) also designates local government as the provider of water and sanitation services, as well as being responsible for storm water. The level of play in the water sector transcends, on one hand, vertical fragmentation with national, provincial and local spheres of government actively involved in different aspects of water and sanitation (Elazegui, 2004; Mazibuko and Pegram, 2004). On the other hand, it cuts across horizontal fragmentation given the complicated nature of development planning and resource management. Different government departments thus

handle sectoral components of water, which inevitably leads to jurisdictional overlap in the interconnected line functions (Elazegui, 2004; MacKay and Ashton, 2004).

Despite the pro-poor focus of water supply and sanitation provision, substantial backlogs still exist amongst poor households (Nnadozie, 2011). Many factors influence the progress of service delivery in South Africa. Torres (2000) argues the following points to illustrate the complexity of service delivery in South Africa:

- Having to build services rather than maintain them,
- High poverty rates,
- High unemployment,
- Reconstruction of public service system/structure,
- Social services expenditure is 21% of GDP while Norway, for example, is able to spend 50% of GDP on social services (Torres, 2000:17).

With poor or non-existent infrastructure found in at-risk municipalities, the decentralisation of water and sanitation services has posed various challenges. Eighty percent of all WSAs can be classified as "very high vulnerability" due to their insufficient technical and financial capacity (DWA, 2012). "This is of significant concern, and although programmes have been instituted to boost the capacity of WSAs, these have generally taken the form of short-term interventions that did little to transfer skills and build and retain capacity within the WSAs" (DWA, 2012:8). The Department of Water Affairs and Forestry (2002:51) indicates that there is wide disproportion in building the capacity of the Water Services Authorities (WSAs) and Water Service Providers (WSPs). There is wide disparity in the capacity of WSAs and WSPs across the country, from relatively well resourced WSAs and WSPs in metropolitan areas and many towns, to very under-resourced and under-capacitated institutions and providers in many small towns and rural areas. National government will provide support for the establishment of effective WSAs and WSPs, especially where water services authorities are weak, where there are no effective water service providers in place, and where national water services assets are transferred to water services institutions. Developing the capacity of water service providers in these areas requires a multipronged strategy (DWAF, 2002:51).

A recurring theme is the inadequate capacity of service providers to fulfil their responsibilities. Delivering and operating new infrastructure involve complex activities but competent skilled

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persons are in short supply, especially in the rural areas. The recent trend towards civil society partnerships with municipalities is beginning to have some positive impact, however, the sustainability of this approach is constantly threatened (SAICE, 2011:11). In 2013, the vulnerability self-assessment of WSAs, in terms of planning, capacity, management and performance, found that only 3% of WSAs are currently operating satisfactorily, while 46% are in crisis (DWA, 2013:35). "One of the most debilitating problems in this regard is a severe lack of capacity at local level (unchanged or worse since 2006). Many of the smaller, poorer municipalities require assistance in capacity building to operate as Water Services Authorities and Water Service Providers" (SAICE, 2011:15).

The Department of Water Affairs (2013) noted that the 46% of WSAs that are in crisis are not limited to the former homelands. This indicates that municipalities other than those that were previously disadvantaged are struggling. This, in turn, creates further disparities within the provinces. Non-functional WSAs are problematic because inefficient infrastructure management leads to non-delivery of services and non-functional water schemes (DWA, 2013). The water services infrastructure in South Africa is deteriorating and, therefore, adversely affects the quality of the service. Therefore, one of the most effective mechanisms of capacity building is the appropriate transfer of knowledge and experience between water services authorities. The primary mechanisms for this are formal forums such as the South African Local Government Association (SALGA), the Institute of Municipal Financial Officers (IMFO), the Water Institute of South Africa (WISA), the Institute of Municipal Engineering of Southern Africa (IMESA) and informal contacts between municipalities facilitated by these or other mechanisms (DWAF, 2002:51-52).

A study conducted by Makgoka (2005:12) suggested that even though the South African government has delivered water supply to rural communities, numerous challenges remain. The service provision has suffered due to a lack of institutional capacity, financial mismanagement and human resource shortages and capacity, which has led to insufficient service delivery by Water Services Authorities. Peters (2010, n.d.) indicates that the problem of service provision by local government is that it has been hampered by the limited capacity

of local government, corruption and political influence, as well as the lack of political accountability and transparency.

A similar study conducted by Dlamini and Cousins (2009:23) showed that in Bushbuckridge Local Municipality there was poor performance by water services authorities because of poor capacity, due to a lack of sufficient human resources and a lack of strategic management, which were the result of a lack of leadership and strategic management skills. Planning was not practical and the tendency was to focus on legislation compliance rather than on performance. A further study conducted by Raab, Mayher, Mukamba and Vermeulen (2008:114-116) states that Bushbuckridge Local Municipality does not have the requisite financial resources to develop water infrastructure and that the municipality suffers from a lack of transparency. According to Dlamini (2007:1), the lack service provision in Bushbuckridge was due to institutional confusion that arose because of changing mandates for water services. Peters (2010:n.p.) mentioned that the problem of service provision by government is commonly exacerbated by a lack of public participation, a lack of information, and complexity around municipalities that are water services authorities and water service providers.

This study puts forward the theory of true access and contingency in order to expand on how policy makers and government officials can conceptualise access and contingency about the provision of water and sanitation services. While it is impressive that the South African government legally ensures the right to water and sanitation, the complex web of influences affecting a user's true access to water and sanitation must be taken into account when developing redistributive or poverty alleviation government policy. The theory of true access established here serves as a guide by which structural, relational and ideological mechanisms affecting true access can be identified. In the applied theory of true access to water and sanitation, a basic level of water is defined by the South African standards set forth by the DWAF as well as national legislation. The DWAF's Free Basic Water campaign, undertaken in 2001, designates that municipal authorities are to provide each household, regardless of income, with 6kl of water per household per month (Smith and Hanson, 2003:1530). For a household of eight individuals, this amounts to roughly 25l per person per day. The Water Services Act of 1997 allows the Minister of the DWAF to set national standards for basic levels of service (RSA, 1997). These standards have been set to define basic access as referring to piped water within 200 meters of one's dwelling.

However, administrative and political office bearers should navigate the eventuality of the water and sanitation reaching the citizens. Hence, situational theories, as contingency theory, is put forward by Fred Fielder, which states that the relationship between leadership style and leader effectiveness is grounded on whether or not the leader's style matches the leadership context (Oc and Bashshur, 2013). Furthermore, he isolates leader–member (users) relations, which is the extent to which followers trust, respect and have confidence in their leaders, as a key foundation for leadership success (Oc and Bashshur, 2013). Furthermore, large organisations such as WSAs must also recognise how their various elements need to focus on their particular strengths in order to work together to serve the needs of the citizens. Therefore, meeting the needs of citizens requires additional competencies that are, traditionally, not present in a utility organisation. Choosing to create that competence within the organisation (vertical integration), or to out-contract the activity, depends on the type of skills that are mandatory on the task, and where these skills are available. One approach to understanding the skills required and the form of organisation suitable to make best use of them is known as contingency theory, that is, the organisation should be designed to be "contingent" upon its environment and the type of product it delivers, as well as the way in which it delivers said product (Weitz and Franceys, 2002:27).
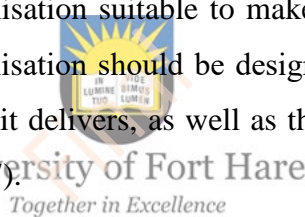
This also explains the dilemma of leadership and trust at the local leadership level. Northouse (2007) identifies three strengths of the contingency theory: firstly, it has empirical support since many researchers have tested it and found it to be valid; secondly, it has broadened the understanding of leadership from a focus on a single, best type of leadership to emphasising the importance of a leader's style and the demands of different situations; and, thirdly, it is predictive as it provides relevant information regarding the type of leadership that is most likely to be effective in particular contexts (Northouse, 2007). In addition, the contingency theory is robust in addressing situational decision-making and can be broadly pragmatic to local government.

The practical reality, however, is that a local leader's life is full of what can been described as mostly mundane tasks. Ensuring delivery of water and sanitation, street lighting and road

gravelling are not necessarily "defining moments of global proportions" which require big decisions. However, these decisions also require the leader's absolute commitment, ability and competence as it affects or impacts on citizens or users. Achieving these tasks, despite their perceived low level of significance, builds trust between the leader and his/her followers, especially in accessing the necessary services. This theory is an excellent interpretation of modern leadership, but it falls short of addressing challenges at the local government level. This is mainly because it does not adequately acknowledge follower power. Furthermore, as its strength, contingency theory is meticulous in addressing relationships between followers and leaders; it comes close to providing a plausible answer to the question of poor performance on the part of elected leaders when it posits the task versus relationship-leadership orientation. It cannot, however, be blindly accepted that leaders with high task orientation will always perform poorly socially, and neither is the reverse absolute. The limitation of contingency theory is in its focus on what can be termed "a defining moment" in which leaders have to make major course-altering decisions.

A number of areas still require basic services such as water and sanitation; these communities have significant concerns regarding the accessibility of the quality of water and sanitation, roads, libraries, and other needs. These communities may also have different ways of engaging leaders and influencing the type of relationship they share and, by consequence, trust. The follower needs would require the same leader to deliver on different mandates. This means that leaders would be required to shift their leadership between differing situations in order to deliver on their mandates. As posited by contingency theory, the same leader may not be adequate for two very different situations. This could explain the service delivery challenges experienced in local government. Consequently, it suggests that it is just the leaders, and only the leaders, who are responsible for achieving these mandates. The efforts of consumers to fulfil the true access of services are limited; hence, in the public service, citizens are major stakeholders in the exercise of leadership as they own the power of leadership. They provide legitimacy in leadership; this can be described as a dynamic in which they "lend" their power to the leaders. It is therefore important that the leadership theories should be strong and explicit on a shared vision between leaders and followers or consumers. In this regard, contingency theory is not adequate to the task. This drawback makes the theory weak on the question of trust and is thus unsuitable as a theoretical framework for this study.

2.4 GLOBAL CONTEXT ON WATER SUPPLY AND SANITATION PROVISION

The United Nations and its partners have made a significant effort in coordinating sound living conditions, for global citizens, in their work towards accessing clean drinking water and decent sanitation. Therefore, in 2000, all UN Member States committed to the UN Millennium Declaration and the achievement of its eight Millennium Development Goals (MDGs) by 2015, with a focus on poverty reduction. Water and sanitation was included as the seventh goal on ensuring environmental sustainability:

- Target 7.C: "Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation", corresponding to 88% of the world population for water, and 75% for sanitation.

Target 7.A, which reads: "Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources" also included an indicator on water resources used (UN, 2015). In this regard, the target on drinking water was reached in 2010 and, in 2015, 90% of the world's population had access to an improved drinking water source. The target on sanitation was one that lagged heavily behind all of the other MDG targets, with 40% of the population still using unimproved sanitation facilities in 2015. Discrimination and inequality in access to water and sanitation also persisted by the end of the MDG period: between and within countries, between rich and poor, and between rural and urban areas. Sachs (2012) states that the probable shortfall in the achievement of the MDGs is indeed serious, regrettable, and deeply painful for people with a low income. The shortfall represents a set of operational failures that implicate many stakeholders in both poor and rich countries. Promises of official development assistance by rich countries, for example, have not been kept.

Following the expiry of the United Nations' Millennium Development Goals (MDGs) in 2015, the Open Working Group of the General Assembly has now agreed upon Sustainable Development Goals (SDGs) for the United Nations' post-2015 development agenda (UN,

2014). The SDGs include a dedicated water and sanitation goal (Goal 6) (see Figure 2.1 in this chapter) with two targets related to water, sanitation and hygiene (WASH) for the year 2030. The World Health Organisation (WHO) and the United Nations Children's Fund (UNICEF) have been responsible for water supply and sanitation related to MDG monitoring via the Joint Monitoring Programme for Water Supply and Sanitation (JMP), which organised a series of consultations working on post-2015 WASH targets and corresponding indicators (WHO, UNICEF, 2011; UNICEF and WHO, 2012).

Figure 2.1: SDGs by Nhamo[1] (Discussion document)

SDGs Research Thematic Lines

Dignity SDGs Set	People SDGs Set	Planet SDGs Set	Parnership SDG	Justice SDG	Prosperity SDGs Set
G1: End Poverty G5: Gender	G2: Food G3: Health G4: Education	G6: Water G12: Consumption G13: Climate G14: Oceans G15: Biodiversity	G17: Global Partnership	G16: Inclusion	G7: Energy G8: Jobs G9: Infrastructure G10: Equality G11: Cities

_____
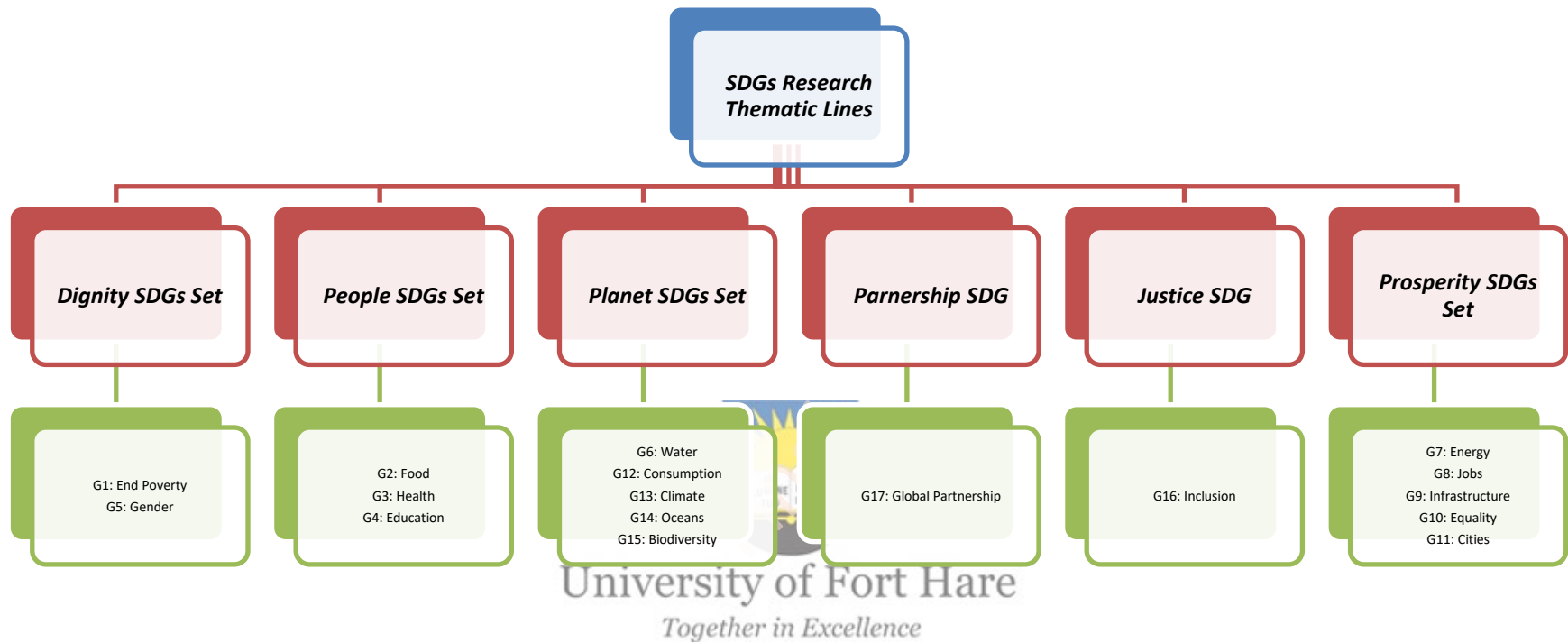
[1] Research project conceptualisation on SDGs: Meeting Agenda and Draft Concept Note, 2016

According to a study conducted by Yu, Wardrop, Bain, Lin, Zhang and Wright (2016), titled "A Global Perspective on Drinking-Water and Sanitation Classification", the current proposals of sustainable development is built upon existing monitoring and shortcomings of the pre-2015 system; they now consider water quality, reduction in inequalities between population groups, levels of service, access to basic services, settings beyond the household (schools and health centres), service sustainability, and hygiene. Four post-2015 targets with corresponding indicators and definitions were first proposed in the second UNICEF/WHO consultation, and were subsequently refined (UNICEF and WHO, 2012).

Table 2.2: Performance targets and indicators on sanitation

Targets	Indicators
1. To eliminate open defecation.	1.1. Percentage of population practicing open defecation.
2. To achieve universal access to basic drinking water, sanitation and hygiene for households, schools and health facilities.	2.1. Percentage of population using 'basic' drinking water; 2.2. Percentage of population using 'basic' sanitation; 2.3 Percentage of population with 'basic' hand washing facilities, with soap and water at home; 2.4. Percentage of pupils enrolled in primary and secondary schools providing basic drinking water, basic sanitation, hand washing facilities with soap and water, and menstrual hygiene management facilities; 2.5. Percentage of beneficiaries using health facilities providing basic drinking water, basic sanitation, hand washing facilities with soap and water, and menstrual hygiene management facilities.
3. To halve the proportion of the population without access, at home, to safely managed drinking water and sanitation services.	3.1. Percentage of population using a 'safely managed' drinking water service; 3.2. Percentage of population using a 'safely managed' sanitation service.
4. To progressively eliminate inequalities in access.	No indicator specified. This target applies to population sub-groups (rich and poor, urban and rural, slums and formal urban settlements, disadvantaged groups and the general population) for all other targets.

The JMP further monitored the proportion of the population using 'improved' and 'unimproved' sanitation facilities and water supplies (see Definitions in Table 2.3).

Table 2.3: Examined proportion of use of improved and unimproved water and sanitation

Drinking-water	Sanitation
1. 'improved' 1.1 'improved drinking-water': use of the following facilities: (1) piped water, (2) public tap/standpipe, (3) tube well/borehole, (4) protected dug well, (5) protected spring, (6) rainwater.	1.2 'improved sanitation': exclusive use by a single household of the following facilities: (1) ventilated improved pit latrine, (2) pit latrine with slab, (3) composting toilet, and flush/pour facility draining to: (4) sewer, (5) septic tank, or (6) pit latrine, and (7) special cases (e.g. flush/pour to unknown place or not sure or don't know where)
2. 'basic' 2.1 'basic drinking-water': use of 'improved drinking-water' with a total collection time of no more than 30 minutes for a roundtrip, including queuing.	2.2 'basic sanitation': could be any of the following limited sharing categories (shared amongst no more than 5 families or 30 persons, whichever is fewer, and if users know each other): (1) ventilated improved pit latrine, (2) any pit latrine with a superstructure, and a platform or squatting slab constructed of durable material, (3) composting toilet, and flush/pour facility draining to: (4) sewer (small bore or conventional), (5) septic tank, or (6) pit latrine.
3. 'safely managed' 3.1 'safely managed drinking-water': use of a water source at the household or plot which reliably delivers enough water to meet domestic needs, complies with WHO Guideline Values for Escherichia coli (E.coli), arsenic and fluoride,	3.2 'safely managed sanitation': use of a 'basic sanitation' facility by which the excreta is safely transported to a designated disposal/treatment site, or treated in situ before being re-used or returned to the environment.

and is subject to a verified risk management plan, could be the following facilities: (1) piped water, (2) public tap/standpipe, (3) tube well/borehole, (4) protected dug well, (5) protected spring, (6) rainwater; and could potentially be (7) delivered water (e.g. by truck, cart, sachet or bottle)	

In January 2013, a Member State-led Open Working Group of the United Nations General Assembly (OWG) was created to guide the process and to propose a set of Sustainable Development Goals (SDGs). In July 2014, the OWG presented their proposal of 17 SDGs, which was formally adopted by the UN General Assembly in September 2014 as the main basis for integrating sustainable development goals into the Post-2015 Development Agenda. (UN WATER, 2015). During 2015, there were monthly intergovernmental negotiations on the SDG agenda and its adoption and implementation, culminating in the UN Summit in New York in September 2015, where the Member States adopted the 2030 Agenda for Sustainable Development. This ambitious "plan of action for people, planet and prosperity" aims at nothing less than "transforming the world." Culminated in a report, which promotes a holistic water and sanitation goal with targets on drinking water, sanitation and hygiene; water resources; water governance; water-related disasters; as well as wastewater pollution and water quality (UN WATER, 2015).

Building on the UN Millennium Declaration and its eight Millennium Development Goals (MDGs) (2000-2015), the 2030 Agenda broadens the MDG focus on poverty reduction to now cover all aspects of sustainable development in all countries of the world in order to ensure that no one is left behind. These include the entire water cycle as well as the management of water, wastewater and ecosystem resources. With water at the very core of sustainable development, SDG 6 does not only have strong linkages to all of the other SDGs, it also underpins them; meeting SDG 6 would go a long way towards achieving much of the 2030 Agenda (UN, Water,

2016:3). The 2030 Agenda includes a dedicated goal on water and sanitation (SDG 6) that sets out to "ensure availability and sustainable management of water and sanitation for all." SDG 6 expands the MDG focus on drinking water and sanitation to now cover the entire water cycle, including the management of water, wastewater and ecosystem resources (UN, Water, 2016:3).

It is prominent that SDG 6 contains eight targets: six on outcomes related to water and sanitation, and two on the means of implementing the targeted outcomes. Based on an extensive consultation process that included all UN agencies involved in global monitoring of water and sanitation, academia, business, civil society and Member States, (UN-Water, 2016:3) has proposed a set of core indicators for national and global monitoring of SDG 6. There are targets identified and listed by the IAEG-SDGs in December 2015 for discussion, and the decisions at the 47th session of the Statistical Commission in March 2016 (UN, Water, 2016:3) reads as follows:

- **Target 6.1** "By 2030, achieve universal and equitable access to safe and affordable drinking water for all"
- **Target 6.2** "By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations"
- **Target 6.3** "By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and increasing recycling and safe reuse by [x%] x per cent globally"
- **Target 6.4** "By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity"
- **Target 6.5** "By 2030, implement integrated water resources management at all levels, including through trans boundary cooperation, as appropriate"
- **Target 6.6** "By 2030, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes"
- **Target 6.a** "By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes,

including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies"

- **Target 6.b** "Support and strengthen the participation of local communities in improving water and sanitation management"

Overall, based on the exposition of Lawford, Jiménez-Cisneros and Yang (2015:35), these targets are supported by science and address the critical issues introduced by the goals. However, some targets seem ambitious or ambiguous because they fail to indicate the population percentage that should benefit by 2030, or they involve several issues, which are not clearly related and measurable. Lawford, Jiménez-Cisneros and Yang (2015:35) further argue that unconvincing targets could deter donor agencies; therefore, discussions, careful assessment and experimentation are needed to clarify target statements. Sustainable water use is likely to provide a better paradigm than sustainable water management for many of these targets.

The water goal should be reduced to a minimum number of targets through consolidation and possible elimination, while still capturing the principles of universality, integration and transformation. Targets 6.a and 6.b could be merged, or Target 6.a could become part of SDG 10 since it promotes equality and Target 6.b could become part of SDG 16, which addresses effective, accountable and inclusive institutions at all levels (Lawford, Jiménez-Cisneros and Yang, 2015:35).

Lawford, Jiménez-Cisneros and Yang (2015:35) recommend that, concerning sanitation, targets be consolidated and framed around three general themes:

- water, sanitation and health;
- reducing pollutants and untreated wastewater discharge into rivers and water bodies; and
- reducing water scarcity by protecting water sources, increasing the efficiency of water use, and better governance. (This could include establishing a water rights/permits

framework tailored to each country's need that would harmonize decisions related to water.)

The international proceedings have reinforced the understanding that the principles of water and sanitation are vital for the lives of poor people, and that access to basic services is a fundamental need and a human right (WSSCC, 2001:1). Moreover, access to safe drinking water and sanitation is a human right that is part of the right to an adequate standard of living, as enshrined in article 11 of the International Covenant on Economic, Social and Cultural Rights; this has been explicitly recognised by the General Assembly of the United Nations and by the United Nations Human Rights Council. States are therefore legally bound to ensure access to water and sanitation for all and they have to take the necessary steps toward the full realisation of these rights. To comply with this obligation, they need to ensure that access to water and sanitation is equitable for all members of the population. Some people require special attention; for instance, people living in small rural communities, the homeless, or the urban poor who cannot pay the water bill. If no specific attention is paid to solutions focusing on those people who are difficult to reach, disparities in access to water and sanitation are likely to increase and will undermine our efforts (UN/WHO, 2012).

The WSSCC (2002:1) has reported that approximately 1.2 billion people internationally do not have access to potable or improved water, and that approximately 2.4 billion people internationally do not have access to adequate sanitation services. A similar scenario is applicable in Africa where it is estimated that 350 million people have no access to safe drinking water and 500 million people lack access to basic sanitation facilities (Garnet, 2002:2). Furthermore, according to a 2012 report released by the World Health Organisation (WHO) and the United Nations Children's Fund (UNICEF), approximately 780 million people around the world lack access to clean drinking water and an estimated 2.5 billion people (approximately 40% of the world's population) are without access to safe sanitation facilities. The United States of America has long supported efforts to improve global access to clean water, sanitation and hygiene (WASH) (Salaam-Blyther, 2012:1). It is hard to believe that in the pan-European region, in 2011, 19 million people lacked access to an improved source of drinking water and 67 million people lacked access to improved sanitation (WHO, 2012).

The international developments outlined in this section illustrate the international initiatives directed at water and sanitation delivery, and the importance placed upon it by the international community. It is further illustrated that Africa is included in these initiatives through organisations such as the African Chapter of the WSSCC and the Water and Sanitation African Initiative (WASAI). South Africa is linked to the WSSCC and global initiatives by its commitment to a South African Chapter of Vision 21, and its targets for water and sanitation by the year 2015. This has been resolved and further illustrated by the South African government setting even more stringent targets by committing to the eradication of water and sanitation backlogs by 2008 and 2010, respectively (DWAF, 2002:ii).

2.5 REGIONAL CONTEXT ON WATER SUPPLY AND SANITATION PROVISION

The African Union Agenda 2063 ushers in the Strategic Framework for Inclusive Growth and Sustainable Development. Through a participative approach, it empowers all stakeholders to contribute to Africa's economic and social transformation during the next five decades. Furthermore, Africa aims to play a more important role in the global development agenda with its Common African Position. In the long term, the stakes are high: transforming African economies, ending poverty, preserving the environment and ensuring well-being and prosperity. What will be the challenges and opportunities for the continent to realise Agenda 2063? (AU, 2015a). Chacha (2016) declares that the 25th Ordinary Session of the African Union Heads of States and Governments in July 2015 adopted the 10 year implementation plan for Agenda 2063. This plan is now used to align and guide the implementation of Agenda 2063 at a national level (Chacha, 2016).

The Millennium Development Goals (MDGs) have not been fully achieved and have been criticised for being too donor-oriented. Hopes are therefore high that a shift towards a universal, rights-based and participatory post-2015 development agenda will galvanise the world into action around the new Sustainable Development Goals (SDGs). Hence, Leny (2015) emphasises that the Sustainable Development Goals (SDGs), which have succeeded the Millennium Development Goals (MDGs), could mark a turning point for Africa. The SDGs

aim to end extreme poverty, hunger and inequality, tackle climate change, and build resilient infrastructure in order to meet Africa's urgent priorities, promote economic growth, achieve access to safe drinking water and energy, and boost investments in agriculture.

Meanwhile, Africa is gaining confidence in defining its own development goals and domesticating the UN SDGs, thus highlighting its own vision of the structural changes that are essential to achieving economic and social transformation. Agenda 2063, endorsed by the Heads of States of the African Union during their January 2015 Summit in Addis Ababa, is a forward-looking framework for Africa to achieve its vision of "an integrated, people-centred and prosperous Africa at peace with itself". Its overall objective is to chart Africa's development trajectory over the next 50 years. It expresses seven broad aspirations resulting from consultations with a variety of stakeholders, each addressing the following: (i) inclusive growth and sustainable development; (ii) integration and unity; (iii) good governance, democracy, human rights, justice and the rule of law; (iv) peace and security; (v) culture and shared values; (vi) people-driven development; and (vii) Africa as a global player and partner (AU, 2015b).

A number of strategic initiatives to fast track their implementation are also underway. Complementing the African Union's Agenda 2063, African regional institutions have engaged in the Post-2015 Development Agenda negotiation process through the Common African Position (CAP), thus highlighting issues considered unique to the African context. The African Union Commission, the Economic Commission for Africa, the African Development Bank and the Regional Bureau for Africa of the United Nations Development Programme co-ordinated their efforts in order to identify six CAP priorities (AU, 2015b; UNECA, 2016):

- structural economic transformation and inclusive growth;
- science, technology and innovation;
- human-centred development;
- environmental sustainability, natural resources management and risk management of natural disasters;
- peace and security; and
- finance and partnership.

The African Water Facility (AWF) has committed 1.6 billion euros to implementing water and sanitation projects in the region. The AWF Chairman, Engr Suleiman Adamu, said this at the opening of the Sixth General Assembly of the African Ministers Council on Water (AMCOW) in Dar Es Salaam, Tanzania (26 July 2016). That is, no fewer than 3.2 million people were expected to benefit from access to improved sanitation and over 2.8 million of these people would have access to improved drinking water sources. Furthermore, the AWF is ambitious in its goal towards developing the region's water sector in order to achieve water security in line with the Africa Water Vision 2025. The Africa Water Vision 2025 entails sustainable access to a safe and adequate water supply and sanitation in order to meet the basic needs of all (Kolade, 2016; UNICEF, 2016)

In addition, these bankable projects are direct contributions to the implementation of the Sustainable Development Goals. Furthermore, the member states have already committed 922 million euros toward the implementation of follow-up projects that are relevant to total development of the sector. Engr Suleiman Adamu said the AWF was committed to developing the sector, hence, the focus on targeting crosscutting issues of climate change, environmental protection, gender and social equity (Kolade, 2016; UNICEF, 2016). "As part of its climate change strategy, the AWF prioritises projects in water harvesting, conservation, storage, recycling and re-use, and the use of renewable energy to power water stations and infrastructures"(Adamu, 2016:3) Adamu expressed hope that all member states would reach a consensus on all deliberations, thereby taking the region to its next level. He called on member states to pay their pledges for project scale-up, and further indicated that, by the end of 2018, an estimated 44 million euros would be required (Kolade, 2016; UNICEF, 2016).

Ms. Rhoda Tumusiime, Commissioner for Rural Economy and Agriculture, African Union Commission, called for the implementation of bankable projects that would be implemented at national levels. Tumusiime urged member states to dialogue and agree upon the direction that Africa needed to take towards achieving sustainable development and water security. According to Tumusiime, the AU's dream is to have an Africa where there is equitable and sustainable use and management of water resources for poverty alleviation and socio-economic development. The AU commissioner called for a baseline that would monitor progress to

enable good reporting and promote the effective communication of achievement on the sustainable development agenda by 2030 (Kolade, 2016; UNICEF, 2016).

The Tanzanian Vice President, Ms. Samia Suluhu, called on African governments to overcome their existing challenges and take advantage of the available opportunities: "The Africa Union has put together Agenda 2063, and water is one of the priorities". "Agenda 2063 is a call for action to all segments of African society to work together to build a prosperous and united Africa based on shared values and a common destiny. Suluhu stated, "The Agenda strives to enable Africa to remain focused and committed to the ideals envisaged in the context of a rapidly changing world". The AWF, managed by the African Development Bank, is a special fund to help member states achieve the objectives contained in the Africa Water Vision 2025, of equitable and sustainable development of its water resources (Kolade, 2016; UNICEF, 2016).

In 2003, the pan-African Rural Water Supply and Sanitation Initiative (RWSSI) was launched with the objective of reducing poverty by accelerating access to improved rural water supply and sanitation facilities in Africa. The African Development Bank has commissioned an external review of RWSSI and the RWSSI Trust Fund (RWSSI TF) in order to develop a new RWSSI and RWSSI TF Strategic Plan 2016–2025, based on its findings (AU, 2016; African Development Bank, 2016). The RWSSI Trust Fund is based on significant financial contributions from Burkina Faso, Canada, Denmark, France, Italy, the Netherlands and Switzerland. It has provided support to over 49 projects in 33 African countries. In view of the daunting challenges that rural populations face - with 8 out of 10 people living in rural areas on the continent lacking safe water and improved sanitation - what should the response of the RWSSI be in order to continue contributing in an even more significant way to the achievement of the Africa Water Vision and the Sustainable Development Goals? (AU, 2016; African Development Bank, 2016).

The African Ministers Council on Water (AMCOW) is working in conjunction with the African Union Commission, and organised with other development partners, with support from the

African Development Bank and the African Water Facility. It represents a political commitment at the highest level, with over 1000 participants from governments, regional institutions, international partners, the private sector, the scientific community, civil society, and the media from all over the world, particularly Africa, meeting to discuss and collectively seek solutions to Africa's challenges related to water resources and sanitation. It is now held biennially, in keeping with the decision of the AMCOW to institutionalise Africa Water Week (AWW), in order to build momentum on achieving the Sustainable Development Goals (SDGs) related to water security and sanitation by 2030, and the 2025 Africa Water Vision as well as actualizing Africa's Agenda 2063 (AU, 2016; African Development Bank, 2016).

The first AWW in the SDG era had as its theme "Achieving the SDGs on Water Security and Sanitation". This choice of theme is driven by recognition of the importance of laying the building blocks for Africa to achieve SDG 6 as well as other inter-linking SDGs connected to water resources management and improved sanitation service delivery. It also represents the quest, on the continent, to place emphasis on matching commitments and plans with concrete actions that have an impact on the ground. It highlights Africa's undaunted focus on achieving Agenda 2063, and emphasises the continent's global strategy to optimise the use of Africa's resources for the benefit of all (AU, 2016; African Development Bank, 2016).

Regional differences need to be addressed; in this sense, the targets should retain some flexibility and allow countries to focus on their most urgent problems. For instance, low-income countries may wish to focus on controlling solid waste discharge, while emerging countries may choose to focuses on wastewater treatment, and all countries may wish to focus on recycling and reusing water. The indicators associated with these targets should be measureable, combinable (so that multiple indicator values can be combined to assess whether a specific target is met) and they should contribute to a logical structure connecting the goal, targets and indicators. Unlike the MDGs, it is proposed that the SDGs are universal and therefore apply to all countries. However, there is on-going debate as to what this means in practice. At the heart of this debate is whether the principle enshrined in the Rio declaration (1992 Earth Summit) of common but differentiated responsibilities (CBDR) is upheld in the SDG process and affects how they are financed (UN, 2014).

2.5.1 Africa's response to contemporary challenges and opportunities

Between 2001 and 2014, the African economy outperformed the global economy, averaging at above 5% per annum, compared to just over 2% during the 1980s and 1990s. Growth in Africa was driven by high commodity demand and soaring prices due to increased world output led by China, India and other emerging economies. It was also facilitated by improved governance and political stability, as well as improved economic policies, including prudent fiscal policies and stronger budgets, which have lowered inflation, improved macroeconomic stability and supported growth (UNECA, 2016).

Despite all this, Africa is only on track to attain three of the eight Millennium Development Goals (MDGs): MDG2 to achieve universal primary education; MDG3 to promote gender equality and empower women; and the targets for MDG6 to combat HIV/AIDS, malaria and other diseases. Initial conditions and high population growth, relative to the rest of the world, played a role in exacerbating the challenge of reaching the MDGs targets. However, other structural economic factors have also prevented Africa from achieving its targets: over-dependency on primary commodities has left many African countries susceptible to external shocks that can disrupt their development gains; low-levels of value addition and economic diversification have limited both job creation and trade within and outside Africa; inadequate participation and influence in the global political, financial and trade infrastructure has weakened Africa's partnerships for development; and a lack of investment in human development, the promotion of rural development, agricultural productivity, social protections, and more equitable public service delivery systems, have increased inequalities and failed to sufficiently reduce poverty on the continent (UNECA, 2016).

In addition, Africa's share of global trade, even with itself, is relatively low. In 2014, Africa's share of total merchandise exports in the world was only 3.5% compared to a 36.7% share for Europe, a 29.7% share for Asia and a 17.3% share for North America. Intra-African trade has risen from just 10% of the region's total exports in 1995 to 17.7% in 2014. However, this is still much less than intra-European exports (68.5%), intra-Asian exports (52.3%), intra-North American exports (50.2%) and intra-South and Central American exports (25.8%). Africa

exports less to African countries than it does to Europe, which receives 36.2% of all African exports, and to Asia, which receives 27.3% of African exports (UNECA, 2016).

In recognition of both Africa's successes and challenges, the African Union created Agenda 2063, a shared framework for inclusive growth and sustainable development in Africa to be realised by 2063. Drawing from lessons learned and encompassing all key continental initiatives, it is the culmination of efforts to achieve the Pan-African Vision of "An integrated, prosperous and peaceful Africa driven by its own citizens and representing a dynamic force in the global arena". It is to be implemented over a period of 50 years, through five 10-year plans that will be executed at the national, regional and continental levels. The Agenda 2063 Framework and its popular version – a simplified version for mass distribution – were adopted by the AU Summit held in January 2015 (UNECA, 2016).

The First Ten-Year Implementation Plan (FTYIP) was subsequently adopted by the AU Summit held in June 2015. The FTYIP is to be implemented between 2014 and 2023 and translates the seven aspirations of Agenda 2063 into 20 goals based on: guidance from the Assembly decisions; the national and regional plans and insights of Member States and RECs; the orientation of existing continental frameworks; and the flagship projects and programmes of Agenda 2063 (UNECA, 2016).

2.5.2   Agenda 2063 as a subset of global 2030

At the same time that Africa has embarked on a journey towards structural transformation for sustainable and inclusive growth, through Agenda 2063, the world has made a commitment to end poverty, protect the planet and ensure prosperity for all. The Global 2030 Agenda for Sustainable Development (Agenda 2030) and its accompanying Sustainable Development Goals (SDGs) were adopted in September 2015, as a fifteen-year plan for "achieving sustainable development in its three dimensions – economic, social and environmental – in a balanced and integrated manner". African countries, as signatories to both Agendas, therefore

find themselves having to simultaneously implement two bold initiatives: Agenda 2063's FTYIP and Agenda 2030 (UNECA, 2016).

Fortunately, significant efforts were made during the formulation process to ensure synergy between the two Agendas and continue to be made to maintain convergence between them. To begin with, an overlap between the two agendas was inevitable because of the way in which they were formulated. In a markedly different approach from that employed with the MDGs, both Agendas were created through a bottom-up approach, which was informed by a comprehensive consultation process that included, among other bodies, African citizenship and Civil Society Organisations (CSOs); Continental Organisations (including the AU, the AfDB and the ECA) and the RECs; the private sector and academia; and relevant international organisations such as the United Nations Development Programmes-Regional Bureau for Africa (UNDP-RBA) (UNECA, 2016).

2.5.3   The Common African Position on the Post-2015 Development Agenda (CAP)

The overlap between the two Agendas was significantly reinforced by the full incorporation of the CAP into both Agenda 2063 and Agenda 2030. The CAP was created to establish a consensus on common challenges, priorities and aspirations, and to enable Africans to collectively and more effectively contribute to the post-2015 agenda. The creation of the 10-member High Level Committee of AU Heads of State and Governments, in 2013, and the endorsement of the CAP by the AU Summit, in January 2014, helped sensitise African leaders to the CAP and coordinate their activities; it also facilitated effective advocacy and the creation of alliances and political buy-in. Africa also established, in January 2015, an African Group of negotiators to promote its interests on the world stage. Finally, on top of utilising the formal mechanisms for providing input into the UN processes, it leveraged its position as having several African negotiators, ambassadors and senior officials in key positions within the UN system. These included the President of the 69th UN General Assembly, the Chair of the G77 and China, the Co-Chair of the Open Working Group on the Sustainable Development Goals, the representative of the host country for the Third Financing for Development Conference,

and the Special Advisor to the Secretary-General on Post-2015 Development Planning (UNECA, 2016).

2.5.4   Convergence between Agenda 2063 and Agenda 2030

As a testament to the hard work and dedication of the African Leadership to ensuring that Agenda 2030 took into account the continent's priorities, Paragraph 42 of the full text of Agenda 2030 reads: *"We support the implementation of relevant strategies and programmes of action… and reaffirm the importance of supporting the African Union's Agenda 2063 and the programme of the New Partnership for Africa's Development"*. Further evidence of the alignment between the two Agendas was provided by a mapping exercise conducted by the AUC that showed high level convergence between the goals and targets of Agenda 2063's FTYIP and Agenda 2030 (SDGs) (UNECA, 2016).

However, the convergence between Agenda 2063 and Agenda 2030 is implicitly less than 100%: Agenda 2030 is a global response to the world's development challenges that, by definition, takes into consideration African dimensions, while Agenda 2063 is an African response to African development that takes into consideration global dimensions. Moreover, Agenda 2030 encompasses economic, social and environmental dimensions, while Agenda 2063 also includes political and cultural dimensions. Both the AUC and the ECA have conducted mapping exercises that compare the SDGs to the FTYIP. The ECA has estimated a convergence of approximately 90% at the level of goals, but only about 69% at target level. In terms of the specific targets: there is 100% convergence with SDGs 2, 5 and 7; 90% convergence with SDG 16; 86% convergence with SDG 4; 80% convergence with SDGs 1, 8 and 9; 71% convergence with SDG 11; 68% convergence with goal 17; 67% convergence with SDGs 3 and 6; 50% convergence with SDG 12; 43% convergence with SDG 43; 33% convergence with SDG 13; 30% convergence with SDG 15; and 29% convergence with SDG 14 (UNECA, 2016).

However, mapping the goals and targets of the FTYIP and the SDGs has its limitations. Firstly, the FTYIP is a subset of Agenda 2063 that focuses on those priorities and objectives that fall

within its 10-year period; it therefore has a lower convergence with the 2030 Agenda than it does with Agenda 2063 in its full form. In addition, less direct strategic linkages may not be identified by a mechanical mapping exercise but can be identified by analysing the general spirit and aim of the goals. Consequently, Aspiration 5 of Agenda 2063, "Africa with a Strong Cultural Identity, Common Heritage, Values and Ethics" has no direct link to Agenda 2063 but can be vaguely linked to target 4.6, which includes "appreciation of cultural diversity and of culture's contribution to sustainable development". The same applies to Aspiration 2, "An Integrated Continent, politically united and based on the Ideals of Pan Africanism and Vision of African Renaissance", which can be vaguely linked to goals that reference regional cooperation such as 1.b, 2.5, and 9.1. It can also be linked to the full text of the 2030 Agenda, which explicitly refers to the importance of integration as a Means of Implementation (UNECA, 2016).

2.5.5 Embracing a circular and a sharing green economy

Africa's greatest hope of transformation from desperation to growth and prosperity is a priority for African leaders. Indeed, the first of the 17 SDGs considers Africa's monumental challenges, as it seeks to "end extreme poverty in all its forms everywhere" by 2030. However, despite this optimism, researchers and public policy for development analysts are still looking for answers to the provocative questions confronting the continent: What makes Africa the poorest region in the world? How can the sustainable and broad-based economic growth necessary to solve this complex task be delivered to offload the heavy burden that weighs the continent down? What is the role of science, technology, innovation and industrialisation in this equation?

The UN secretary-general, Ban Ki-moon, said the SDGs are in sync with Africa's priorities and could transform the continent. Speaking a day after the adoption of the SDGs at an event organised by the non-governmental organisation Global Citizens and attended by prominent personalities in world politics, social activism, business and entertainment, Ki-Moon is reported to have said: "Let's make the global goals a global reality. These goals are a promise from your leaders. Hold them to it. Demand that they deliver" (Kingsley, 2015). The UN chief added that SDGs aim to end poverty, hunger and inequality, tackle climate change and build

resilient infrastructure. Hence, in July 2014, he addressed the Third Forum for Inclusive and Sustainable Industrial Development (ISID) in Addis Ababa, Ethiopia, ahead of the adoption of the SDGs and described 2015 as "a critical year in charting a common framework for future development in a balanced and integrated manner" (UN, 2015b).

2.5.6   Domestic Resource Mobilisation

Financing remains an integral part of the African Development Agenda. Countries must build on advances made since the Monterrey Consensus was reached and continue to strengthen the mobilisation and effective use of domestic resources. This is particularly important as it becomes clear that Official Development Assistance (ODA), although still relevant, is becoming increasingly insufficient and unstable in the face of ongoing economic problems in Europe and elsewhere, and can therefore not be the principle source of funding. In addition, Africa's status as the second fastest growing region in the world makes a compelling case for Africa to fund its own development as a path to increased ownership and self-determination. Domestic resource mobilisation already accounts for more than $527.3 billion of development finance compared to just $73.7 billion in private flows and $51.4 billion in official development assistance (UNECA, 2016).

Africa's leaders know that for the continent to achieve its lofty goals, financing the implementation of SDGs requires substantial investment. At the ISID forum in Ethiopia last year, African Union (AU) chairperson, Nkozasana Dlamini-Zuma charted, the way forward; she urged leaders to take practical steps to apply research, science, technology and innovation to drive the continent's development (UNIDO, 2015). For Dlamini-Zuma, industrialisation, the ninth SDG, is paramount for Africa to adopt for the purpose of inclusive and sustainable industrial development as a driver for job creation, economic growth, technology transfer, investment flows and skills development. This goal commits to building resilient infrastructure, promoting inclusive and sustainable industrialisation, and fostering innovation (AU, 2015a).

Dlamini-Zuma cautioned African researchers and policymakers about African youth risking their lives while crossing the Sahara Desert in order to make dangerous voyages across the Mediterranean Sea so that they are able to seek jobs in Europe. "Africa needs to take its own responsibility for its own development. Africa must industrialise and beneficiate," she noted. "If we do not give our growing large youth population, instead of getting a demographic dividend, we will get a demographic disaster, which has already started. This is a tragedy whose roots are in the underdevelopment and marginalisation of Africa" (AU, 2015a).

The AU acknowledges that the SDGs offer great hope for transforming Africa, and has asked its partners to support Agenda 2063 — the continent's bold policy to create "the Africa we want" by 2063 — so that the continent goes beyond merely exploiting its agricultural and mineral resources and focusses on industrialisation. Endowed with vast resources, Africa can, through industrialisation, develop its oil and gas sector, and the automotive and textile industries. Africa also bears the biggest burden of diseases but hardly develops drugs, which creates a major opportunity for the development of the pharmaceutical sector. Therefore, by adopting this path and fully committing to embracing the SDGs, Africa could reach a turning point in the post-2015 era, a period when the continent takes a bold step towards growth and transformation (AU, 2015b).

2.6 NATIONAL CONTEXT ON WATER SUPPLY AND SANITATION PROVISION

A hallmark of development, both the East Asian and democratic variants thereof, has been the adherence to a consistent economic growth path pursued over a sustained period. In the case of South Africa, however, the course chartered for development and economic growth has been anything but consistent and, as is discussed below, the policies implemented often appear to have been at cross-purposes. On its assumption of power, the ANC's vision of transformation was guided by its 1955 Freedom Charter, which advocated for equality, inclusivity and improving the lives of the poor. The new government thus committed itself to redirecting resources to the poor, with the aim of creating a more just and equitable society (ANC, 1994). In this respect, as outlined in the discussion below, over the course of the past two decades it

has pursued a succession of developmental and economic growth policies, commencing with the Reconstruction and Development Programme (RDP).

2.6.1 Navigating the government's development path

The challenge for South Africa lies in its ability to translate its plethora of development plans into implementable programmes and projects that culminate in the achievement of set goals and objectives within the designated timeframes. The main objectives of successive governments since the onset of democracy have been to create jobs, reduce poverty and bridge income inequality. These objectives have translated into several development programmes aimed at ensuring high and sustainable economic growth, an equitable distribution of the gains from growth, and bridging the gap between rich and poor through social safety nets and efficient service delivery.

These development programmes include the Reconstruction and Development Programme (RDP) of the early 1990s; the Growth, Employment and Redistribution (GEAR) strategy of 1996; the Accelerated and Shared Growth Initiative for South Africa (ASGISA) of 2005; the National Industrial Policy Framework out of which emerged the Industrial Policy Action Plan (IPAP) of 2007, and the New Growth Path (NGP) of 2010.
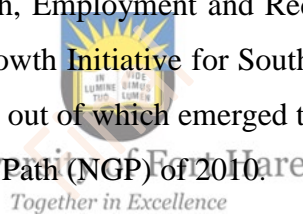
2.6.2 The Reconstruction and Development Programme (RDP)

The RDP (1994) released by the ANC and its alliance partners was the culmination of a long process of consultation with civil society organisations, non-governmental organisations, research organisations and the business sector (Terreblanche, 1999). The RDP represented the first socio-economic policy framework of the post-apartheid government and it aimed to restructure and boost the economy and address the impoverishment, inequality and rampant unemployment facing the majority of its citizens (ANC, 1994). The RDP was explicit in its intent to redress the imbalances of the past and to orient development strategy towards improving "the quality of life of all South Africans, and in particular the most poor and marginalised sections of our communities" (ANC, 1994:15).

In its broad orientation, the RDP could be seen to be supportive of the principles of a developmental state in the extent to which it appeared to be aligned with Keynesian principles that advocated a significant role for the state in the economy. The RDP asserted that 'reconstruction and development will be achieved through the leading and enabling role of the state, a thriving private sector, and active involvement by all sectors of civil society which in combination will lead to sustainable growth' (ANC, 1994). Its main policy goal was to link growth, development, reconstruction, redistribution and reconciliation into what was referred to as a 'unified programme' supported by an expansive infrastructural programme (Bond, 2001; ANC, 1994). The RDP proposed an interventionist role for government, while its transformative focus was on social welfare and the redress of inequalities stemming from the previous regime (Visser, 2004).

Due to its reconstruction and transformation objectives, the RDP was likened to the Marshall Plan (Naidoo, 2006). Its transformative socio-economic goals were to create productive employment opportunities at a living wage, alleviate poverty and inequality, meet basic needs, ensure a decent standard of living, democratise the economy, empower the historically oppressed and remove discrimination in the workplace (HDR, 2000:viii). Essentially, the RDP was a strategy for narrowing the gap between the rich and the poor, with a strong emphasis on extending access to basic services to all (Lundahl and Petersson, 2004).

However, the RDP was not without its critics. While some criticised the 'extravagant promises' of politicians, others pointed out that the programme never got off the ground due to a lack of capacity at the local level where most of the projects were to be implemented (COSATU, 2005; Lundahl and Petersson, 2004). Although the RDP aimed to provide a coherent and integrated socioeconomic framework, it failed to specify the policies and strategies that would enable government to achieve its stated goals (Fine, Ashman and Newman, 2010). Additional problems included a lack of funding and commitment by the public and private sector and the lack of government capacity and coordination to implement the RDP (Terreblanche, 1999), while the low level of economic growth, which was needed to fund the various social development initiatives, was seen to seriously hamper the implementation of the government's plans (Naidoo, 2006). Other criticisms included the ambiguous nature of the RDP base

document, which was exacerbated when it was formalised in the RDP White Paper released towards the end of 1994 (HDR, 2000). At the time, Adelzadeh and Padayachee (1994:25) concluded that the RDP White Paper was not only "incoherent and fragmented" but that "the possibility of retrieving the earlier vision is eroded daily in the cut and thrust of 'reconciliation' and compromise-making politics within the GNU".

The provision of infrastructure for water supply and sanitation services was identified as a key element of the RDP (DWAF, 1994:6). The Reconstruction and Development Programme (RDP) emphasised the provision of fundamental benefits (DWAF, 2004). Subsequent to 1994, indispensable hose provision, alongside cleanliness amenities, were supplied to 21.1 million and 17.3 million citizens, respectively (DWA, 2013:67). At present, 1.3 million family units (6%) are deficient in ingress to conduit freshwater provision amenities, despite the fact that 4.5 million family units (31%) are deficient in access to essential hygiene amenities (DWA, 2013). In addition, rural communities in South Africa still do not have access to water services as expected and thus would often resort to using unprotected water sources for their water needs (National Treasury, 2012). These surfeits signify the unending inequality in access to benefits. The 71 remonstrations that took place in 2012 were ascribed to the displeasure of access to clean drinkable water. Enshrined in the constitution is the right of all people to have access to basic clean drinking water and sanitation (DWA, 2013: 2). Gaining the right to use a hose, as well as cleanliness benefits, are crucial to evolution. Focusing on desperation, the evolution of the provision of services can shed light on areas that might constantly encounter sluggish advancement and, for that reason, necessitate that they be prioritised.

According to Blumenfeld (2015:8), the main lessons learnt from the failure of the RDP were, essentially, the same as those that had undermined 'development planning' in previous decades:

- Symbols, no matter how widespread their political support, are no substitute for real policies in promoting economic development;
- The need for difficult political choices and clear identification of priorities cannot be obviated by mere rhetoric or good intentions;

- Without clarity of institutional structures, development plans have no prospect of successful implementation;

- There are unavoidable trade-offs in seeking to address economic growth, socioeconomic reconstruction and economic redistribution simultaneously; and

- Without economic growth, the requisite resources for implementation, including fiscal revenues, will not be forthcoming.

Even though it formed the democratic attempt to attack poverty and deprivation, it was never adopted beyond its vision and was abandoned in 1996 in favour of the fiscally conservative Growth, Employment and Redistribution (GEAR) policy, which aroused significant controversy (Zarenda, 2013:7).

2.6.3 Growth Employment and Redistribution Programme (GEAR)

Aside from its numerous domestic challenges, the new government struggled to position itself within a growing and unpredictable global economy. Moreover, the absence of sustained economic growth, increasingly high unemployment rates and the instability of the rand resulted in the closure of the RDP office in March 1996, and the introduction of a new macro-economic policy framework in June 1996 (Visser, 2004). Despite having earlier criticised the ideas of the pro-market Washington Consensus (ANC, 1996), the ANC government adopted the Growth, Employment and Redistribution (GEAR) macro-economic policy in 1996. This policy epitomised the free market oriented neoliberal framework promoted by the World Bank and the International Monetary Fund. Tregenna (2011:627) characterises GEAR as "broadly neo-liberal, including amongst its key tenets tight monetary and fiscal policies, elimination of exchange controls, labour market flexibility and privatisation". The core goal of GEAR was to attain macro-economic stability and stimulate investor confidence; this took precedence over the social welfare developmental focus of the RDP, and its attempts to reduce poverty and inequality

GEAR's point of departure was that sustained growth would require "transformation towards a competitive outward-oriented economy" and higher levels of growth would be achieved

through core elements such as budget reform, fiscal deficit reduction, consistent monetary policy, relaxation of exchange controls, tax incentives, trade liberalisation and an expansionary infrastructure programme. It was estimated that such structural adjustments would enable South Africa to grow its economy by six percent and create 400 000 jobs per annum, by the year 2000, which would enhance credibility and encourage investor confidence (Department of Finance, 1996:1–2).

For many scholars, GEAR's narrower focus on fiscal stability and withdrawal from intervention in the market was at the cost of broader developmental goals. There was a clear shift in emphasis from "growth through redistribution" which had been the dictum of the RDP, to the GEAR strategy of "redistribution through growth", where redistribution was a secondary outcome that would presumably be achieved through a "trickle-down" effect (Visser, 2004:9). In this respect, GEAR's focus on macro-economic stability overshadowed the transformative agenda envisaged for a developmental state. While Jahed and Brey (2011) highlight some of the successes of GEAR, namely, the reduction of the fiscal deficit and lowering inflation, they also point to its poor performance in attracting foreign and local investment, and the low levels of GDP growth, both of which they deem to be responsible for the failure to create jobs. The Accelerated and Shared Growth Initiative for South Africa replaced GEAR, in 2005. Moreover, Visser (2004) acknowledges the challenges of prolonged poverty, driven by unemployment and low earnings, and the jobless nature of economic growth.

2.6.4   The Accelerated Shared Growth Initiative for South Africa (ASGISA)

ASGISA, the so-called extension of GEAR, was launched in July 2005 in an attempt to further stimulate economic growth. ASGISA represented an economic development strategy that, once again, supported neoliberal economic orthodoxy and a free market system (Mabhula, 2013). Its main objective was to steadily increase economic performance and job-creation capacity, and to halve unemployment and poverty by 2014. In order to do so, a number of strategic government interventions were put into place in specific socio-economic areas in order to address what had been identified as six major constraints to economic growth (The Presidency, 2006). These constraints included currency volatility; the shortage of skilled labour; infrastructure backlogs; barriers to entry and limited opportunities for new business; burdens

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placed on small and medium businesses, as a result of the regulatory environment; as well as deficiencies in state organisation, capacity and leadership (Van der Walt, 2010; The Presidency, 2006).

Government interventions deemed necessary to counter these constraints were: infrastructure investment, sector-specific investment strategies, skills and education development, the elimination of the second economy, improved macro-economic management, and enhancement of the quality of governance (Mlambo-Ngcuka, 2006). The Joint Initiative on Priority Skills Acquisition (JIPSA) was a sister programme, intended as a joint initiative between government, business, labour and educational research institutions with a focus on addressing the shortage of scarce skills in the country (Lunsche, 2010; The Presidency, 2006). However, both policies have been criticised for failing to meet their targets due, in large part, to poor state capacity and weak organisational leadership (Mabhula, 2012).

The government's own allies including, amongst others, the Congress of South Africa Trade Unions (COSATU) and the South African Non-Governmental Coalition (SANGOCO), have also raised criticism of ASGISA. Thus, COSATU's General Secretary, Zwelinzima Vavi, maintained that ASGISA would need fundamental restructuring to include a common commitment to shared 'rather than inequitable' growth throughout all its programmes. He maintained that COSATU's stance was that "elements of ASGISA are inadequate to achieve the desired transformation of the economy" and that proposals on sector and infrastructural growth should be redesigned around a coherent development vision (Louw, 2006). SANGOCO's criticism related to the lack of consultation prior to the preparation of the framework document, and the fact that civil society had been excluded from the planning and design of ASGISA (Chagunda, 2006).

2.6.5   The New Growth Path (NGP) and National Development Plan (NDP)

The New Growth Path (NGP), introduced in November 2010, has as its main policy objective the stimulation of economic growth as a means to accelerate employment creation and create

a more equal and inclusive society and, to a certain extent, it was intended as a mechanism to advance a developmental state mandate. The NGP framework stipulates that massive infrastructure investment in the areas of energy, transport, communication, water and housing will be key drivers in stimulating 'decent' employment. Its target is to create five million new jobs by 2020. The NGP document proposes "smarter coordination" between the different tiers of government and the forging of closer ties with business and labour (The Presidency, 2010).

The New Growth Path acknowledges as its core challenge the reality of mass joblessness, poverty and inequality, as well as the need for a developmental state to leverage resources and align market outcomes to developmental needs. Key actions proposed by the NGP include the use of micro and macro policies to create a favourable environment and support labour-absorbing activities; the generation of consistent and focused state policies that facilitate dialogue with business, labour and civil society actors; and the re-industrialisation and deepening of both domestic and regional markets for South African goods (The Presidency, 2010). However, when investigating whether the NGP's targets of increasing economic growth to 6%–7% per annum, and reducing unemployment to 15%, were feasible, Van Aardt, Ligthelm and Van Tonder (2011) found, firstly, that factors other than economic growth affected job creation in South Africa and, secondly, that higher economic growth would not automatically translate into higher job creation due to the current preference of capital over labour in production processes. These authors further questioned the focus of the NGP on specific sectors and pointed out that, since 2000, nine out of the ten selected economic sectors in their survey showed a preference for capital over labour. The NGP has also been heavily criticised by COSATU who questioned its merit as a "comprehensive and overarching development strategy" and called for its revision in that, in its present form, it would not achieve its goals of addressing unemployment, poverty and inequality (COSATU, 2011a). Amongst the revisions suggested by COSATU, were the need for a greater focus on public healthcare and education, and a more serious focus on the expansion of training opportunities (ILO, 2011).

In May 2010, President Jacob Zuma appointed the National Planning Commission (NPC), under the Chairmanship of the Minister in the Presidency for National Planning, Trevor Manuel, to draft a vision and national development plan for consideration by Cabinet and the

country. The NPC represented an advisory body consisting of 26 people drawn largely from outside government, all of whom were "chosen for their expertise in key areas" (National Planning Commission, 2011:15). The Commission released a Diagnostic Report in June 2011 which "set out South Africa's achievements and shortcomings since 1994" and set out nine primary challenges, inter alia, chronic unemployment; poor education and infrastructure; an economy that is "unsustainably resource intensive"; inadequate and poor quality public health and general public services; high levels of corruption; and a society that is deeply divided (Zarenda, 2013:2).

The National Development Plan, released in 2011 but officially launched in 2012, represents the government's latest policy framework and is one of the few documents that have explicitly referred to the need to build a developmental state. Significantly, it also asserts the government's commitment to establishing a democratic developmental state: "The National Development Plan highlights the need for a developmental state that is capable of driving the country's development. Building state capacity is the most important step to achieve a developmental state. However, the plan also recognises that not all capable states are developmental and so emphasises the importance of building a capable and developmental state within a vibrant democratic system" (National Planning Commission, 2011:474).

The NDP defines a desired destination and identifies the role different sectors of society need to play in reaching that destination. It serves four broad objectives: providing overarching goals for what the country wants to achieve by 2030; building consensus on the key obstacles to achieving these goals, and what needs to be done to overcome those obstacles; providing a shared long-term strategic framework to advance the plan's long-term goals; and laying the foundation of how best to use limited resources. The core elements of a decent standard of living are housing, water, electricity and sanitation; safe and reliable public transport; quality education and skills development; safety and security; quality healthcare; social protection; employment; recreation and leisure; a clean environment and adequate nutrition. To realise these goals, the plan draws on the energies of the country's people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society. However, notwithstanding its explicit intent to establish a

democratic developmental state, the National Planning Commission is vague on the details of what might constitute such a state, other than indicating that it will aim to rapidly transform the economy (National Planning Commission, 2011:474).

A developmental state brings about rapid and sustainable transformation in a country's economic and/or social conditions through active, intensive and effective intervention in the structural causes of economic or social underdevelopment. Developmental states are active; they do not simply produce regulations and legislation. They constantly strive to improve the quality of what they do by building their own capacity and learning from experience. They also recognise the importance of building constructive relationships with all sectors of society, while insulating themselves from capture by sectional interests (National Planning Commission, 2011:410)

Furthermore, it is noteworthy that the eight areas identified by the NDP (National Planning Commission, 2011:410) as key to the establishment of a capable and developmental state are operational rather than strategic in their orientation. These areas are: the need to stabilise the political-administrative interface; to make public service and local government administration careers of choice; to develop technical and specialist professional skills; to strengthen delegation, accountability and oversight; to improve interdepartmental coordination; to take a proactive approach to improving relations between national, provincial and local government; to strengthen local government; and to clarify the governance of SOEs.

The NDP has also not been without its critics, who have attacked both its ideological orientation and its format. In this regard, COSATU complained that "On Macroeconomic policy, instead of proposing a radical shift, the Resolution proposes 3 cautious changes to policy, in deliberately ambiguous language which rather than decisively confronting the Treasury's conservative stranglehold on macroeconomic policy, will perpetuate massive contestation over the interpretation of ANC policy" (COSATU, 2013:9). It also criticised the plan for its excessive length (484+ pages), the number of "inconsistencies and errors" regarding the "incorrect interpretations" of the relevant literature, as well as the incorrect "projections of

poverty and employment" (COSATU, 2013:18). Other criticisms relate to its overly ambitious 'objectives, aims and coverage' and that, in order to be successful, a number of 'capabilities' would be required by key players in terms of implementing and monitoring the NDP (Zarenda, 2013). Further areas of concern relate to the sequence and structure of the wide number of development efforts required at different levels, as well as coordination with other national plans such the Medium Term Spatial Development Framework, and provincial and local level plans (The Presidency, 2009).

State ideologues have attempted to portray the twists and turns in economic policy as part of an evolutionary process. Thus, Trevor Manuel, the Minister in the Presidency responsible for the NDP, asserts that there has not been "a deviation from where we were headed but rather a refinement of the route" and that "simply put, the legislative and policy frameworks that have been adopted since the first democratic elections in 1994 are more than adequate, but require proper implementation to be effective" (Manuel, 2013). However, critics such as Fine (2007:1) maintain that the government's renewed interest in the developmental state is "a reinvention of the past decade's economic and social policy, a way of excusing the Gear policy while departing from it." This therefore serves to rationalise the government's volte-face in key policy areas:

First, the rise of the putative developmental state is a rhetorical shift in the government signalling its belief that a job has been half done and conditions are now favourable for more interventionist policies. Second, of course, the politics of the rise of the developmental state is a matter of appeasing critics of the government's economic and social policies. In particular, the state has failed to address high and worsening levels of unemployment and impoverishment, while black economic empowerment has flourished as a source of elite enrichment (Fine, 2007:1).

In contradictory fashion, given his assertions on the general continuity of policy directions cited earlier, Trevor Manuel on May 2012, in Penderis (2013), was remarkably candid in his admission of the inconsistency of state economic policy and its short-term focus. Manuel

asserted the following: "Therefore, sustainable growth and development require policy stability. Changing policy too often has the effect of destabilising the bureaucracy and, therefore, not allowing policies to take effect and show results. Our performance as a country on this measure has been uneven, at best. It is worth pausing for reflection on why we faltered on something so self-evident. After 1994, it was apparent through our policies that the government was aware that our people had high expectations" (Ndokweni, Owusu-Sekyere and Nhemachena, 2016).

However, the performance of the public service did not reflect the improvements that were deemed necessary to meeting the policy objectives. Many of these failures had their root causes in the capacity of the state machinery inherited from apartheid – the corruption, the absence of a culture of public service, poor skills, and so forth. Instead of analysing the root causes of the performance failures and embarking on the painstaking process of institution building, we resorted to changing policy each time we were dissatisfied with the results we saw. Too often, new policies are implemented in and without due consideration, as new leaders seek to make their mark, or as a response to the latest international fad. Many of the problems with public sector performance have to do with deeply rooted systemic issues, and there is no 'quick fix' substitute for a long-term and strategic approach to enhancing institutional capacity (Ndokweni, Owusu-Sekyere and Nhemachena, 2016). Therefore, according to DWAF guidelines (DWAF, 2000:6), the level of water and sanitation services must be technically, financially, socially, environmentally and managerially sustainable.

It is thus evident that the ruling ANC government has been struggling to maintain a consistent and sustainable developmental economic trajectory since it assumed power 24 years ago. This has meant that the policies in place, and subsequent state intervention, have not succeeded in accelerating economic growth or in alleviating poverty. Due to the fallout of the RDP, GEAR, ASGISA and other policy interventions like IPAP (Industrial Policy Action Plan), there is no guarantee that the NDP will stand the test time. If it does, it leaves much to be desired in domesticating Africa 2063 and SDGs to eradicate poverty and inequality, especially in the water sector.

2.7 PROVINCIAL CONTEXT ON WATER SUPPLY AND SANITATION PROVISION

In March 2015, the Premier of the Limpopo province, Stannely Mathabata, declared the Limpopo Development Plan (LDP) a strategy that reflects upon its own steps in an ongoing journey to eliminate poverty, reduce inequality and improve the quality of life of citizens, as visualised in the National Development Plan (NDP). For the province to realise its developmental objectives, it is mandatory that long-term planning, integration and coordination are institutionalised. This institutionalisation will be managed by the Office of the Premier and will be rolled out to every organisation in Limpopo, hence, the Limpopo Growth and Development Strategy (Limpopo Provincial Government, 2015).

The purpose of the Limpopo Growth and Development Strategy (LGDS) is to provide a vision for development that reflects the development priorities, in terms of social needs and competitive economic growth potential, of the Province; it is also consistent with national development imperatives. The approach to be followed should be consistent with the intergovernmental relations focus of a dynamic planning method, which aligns national, provincial and local government policies, strategies and plans in an interactive way. Capacity building to promote developmental local government is recognised as a major priority for interventions from the provincial level (DWAF, 2006:6; Limpopo Provincial Government, 2006; SALGA, 2006).

Limpopo appears to be in the grip of a water crisis, with warnings emanating from water specialists who all point towards a water stressed province – rivers are dying and major water storage dams are highly contaminated. Access to clean water is a basic human right, unfortunately, in many parts of the country, and in Limpopo currently, this right is not guaranteed (Limpopo Employment Growth and Development Plan, 2014:56).

Limpopo is failing to produce enough engineers to plug the skills gap and the lack of investment in water research means that the province is now losing ground. The Department of Water and

Environmental Affairs have also acknowledged the dire shortage of technical skills in municipalities, which are critical to the delivery of healthy water to millions of consumers, especially in poorer areas. Engineers and technicians are instrumental in the construction, maintenance and repair of water infrastructure, as well as the treatment of water (Limpopo Employment Growth and Development Plan, 2014:56).

Forty-three percent of dams managed by the Department of Water Affairs and Forestry (DWAF) have safety problems and require urgent repair. In the past decade, most municipalities have focused their budgets on providing these basic services to communities who did not previously have access to them. As a province, Limpopo can be proud of those achievements, however, the downside of this is that the province's water institutions neglected to maintain its water service delivery assets while addressing some of the water service delivery backlogs (Limpopo Employment Growth and Development Plan, 2014:56).

It is estimated that there are currently over 50 settlements in Limpopo that do not have any form of infrastructure for the provision of water services. However, the immediate challenges are settlements in which water sources, bulk distribution and internal reticulation networks have been delivered, but the people in these settlements are still without potable drinking water. For example, during the recent cholera outbreak, some incidents were reported from settlements that have been provided with water services infrastructure. In addition, a substantial number of households residing adjacent to the province's mega dams, such as Flag Boshielo and Nandoni, are also without access to potable drinking water due the lack of bulk distribution and internal reticulation networks (Limpopo Employment Growth and Development Plan, 2014:57).

Local water resources are already in short supply in most of the identified municipal and industrial growth points and need to be augmented by transfers from other sources. Almost all the water resources in Limpopo are nearly fully developed with all the available water being already allocated and there are limited options for further resource development. These conditions are attributable to the arid climate, unfavourable topography, sandy rivers and the

limited potential for increased groundwater abstraction (Limpopo Employment Growth and Development Plan, 2014:57).

A large proportion of the rural domestic water supply is sourced from ground water, however, due to the potential over-exploitation of underground water sources, its abstraction may not guarantee long-term sustainability. Many water schemes suffer significant water losses due to a lack of technical capacity, decaying infrastructure and the lack of proper operation and maintenance capacities. The lack of dam management, neglected dam run-offs, huge pipe leaks and vandalism are serious problems that impact on reliable, consistent and sustainable water service delivery (Limpopo Employment Growth and Development Plan, 2014:57).

Therefore, water utilities will take priority due to the immense mining and energy investments that have flown into the province. This results in a pressing demand for infrastructure development, especially in the areas in which these developments are taking place. It is also crucial to note that the shortage of water and electricity in some rural pockets of the province have reached alarming levels.

2.7.1 Key strategic interventions underpinning the delivery of water services in the Limpopo province.

It is imperative that all water services authorities in Limpopo, with the technical support of the Department of Water and Environmental Affairs, must ensure that the province has sound demand and conservation management, waste water reuse, optimisation of local sources including ground water, infrastructure asset management as well as management of water resources and associated infrastructure. The key strategic initiatives discussed here are currently at different stages of planning and implementation. The Olifants River Water Resources Development Project (De Hoop Dam), that is, the construction on the De Hoop dam (Phase 2A) was due in 2010. Realignment of road R555, for 25 kilometers, has been completed and opened for traffic in June 2009. Consultation with the four affected municipalities (Mogalakwena, Greater Sekhukhune, Polokwane and Capricorn) and the relevant mines on the signing of water supply agreements (off-take agreements) and water allocations have been completed. Once completed, De Hoop dam will supply both domestic and industrial water to

the Greater Sekhukhune, Capricorn and Waterberg District Municipalities. In the case of the Nwamitwa Dam (Great Letaba Water Scheme), the feasibility study on the dam with costing and planning for implementation commenced during the 2009-2010 fiscal year (RSA, Limpopo Provincial Government, 2004).

The phased implementation of primary water supply will start with the appointment of PSPs to design and supervise construction. This project will start with raw water abstraction from Run-off River, upgrading of the water purification works, pump mains and reservoirs. The implementation of the bulk distribution networks for the Vhembe District Municipality, including the Makhade Airforce Base, commenced during the 2009-2010 financial year. A review of supply to the Malamulele and Giyani (previously supplied by Middle Letaba) as well as Botlokwa (through the Vleifontein pipeline) in the Capricorn District has been undertaken. The feasibility of raising the Mutshedzi dam is also being investigated in order to augment water supply to the Nzhelele area, via the Vhondo Mokolo and Crocodile (West) River Water Augmentation Project. The feasibility study to investigate and ultimately plan, design and construct the infrastructure for the water supply to the current identified users, such as the Medupi and existing Matimba power stations, the Grootegeluk Mine, as well as possible further developments such as petro-chemical plant and power stations, began in earnest during the 2009-2010 financial year. The project is destined to support a number of planned and anticipated consequential developments in the Lephalale area, which is associated with the rich coal reserves in the Waterberg coal field, for which additional water will be required.

Based on the Water Strategy (2007-2012) (DWAF, 2007), Limpopo had a deficit of 212 million m³ between water utilization and water availability in 2000. The De Hoop Dam is complete in the Greater Tubatse municipal area, bulk water supply to Steelpoort area is well underway and augmentation is being provided for Lephalale from the Crocodile River. Despite these developments, a deficit of 123 million m³ is anticipated for 2025, which is a constraint on development prospects in Limpopo. Improved strategies for water resource management are therefore urgently required. It is of particular concern that agriculture uses 62% of all the water resources in the province, but the benefits gained from this sector may not be commensurate with the high level of consumption. Water infrastructure is ageing and many illegal connections

have been made. The proposed Nwamitwa Dam in Greater Tzaneen, as well as the prospect of raising the Tzaneen Dam wall, are potential opportunities for further water augmentation in the Province. These developments include (RSA, Limpopo Provincial Government, 2004):

- Construction of the Medupi Power Station (in progress);
- Development of further power stations;
- Extension of Grootegeluk mining operations and possible further coal mines;
- Possible petrochemical industries (coal to liquid fuel) to be developed around the coal fields near and to the west of Lephalale;
- Possible exploitation of underground gas resources; and
- Associated secondary and tertiary development.

Notwithstanding the good run-offs in the country, Limpopo's current water storage level is at 70% against the national average of 81%. Middle Letaba is the lowest water storage facility in the province, at less than 7%, and it poses a threat to future domestic supply to Greater Giyani and surrounding areas (RSA, Limpopo Provincial Government, 2004). At the Limpopo Water Summit, held at the Meropa Casino Hotel on 21 February 2006, it was resolved that focussed attention be given to water resource development, developing a coherent provincial water strategy, capacity building/research/support, institutional reform, and free basic services.

The strategic issues and challenges that were raised during the water summit, district workshops and provincial stakeholder meetings were identified, refined, prioritised and grouped into the following Strategic Goals:

- Strategic Goal 1: Promote socio-economic development and poverty alleviation through the strategic alignment of planning and projects;
- Strategic Goal 2: Ensure Water Resource Allocation and Development to meet the needs of the province;
- Strategic Goal 3: Delivery to overcome Water Service Backlogs;
- Strategic Goal 4: Ensure the sustainability of water provision through institutional and sector skills development;
- Strategic Goal 5: Ensure ; and

- Strategic Goal 6: Ensure effective collaboration and communication in the sector (DWAF, 2006:21).

Furthermore, the Spatial Rationale identified 106 settlement clusters, comprising 29 growth points (places with high levels of economic activity or economic potential) and 77 population concentrations (groups of settlements with large populations but usually without a strong economic base), and cover 53% of the population. Provincial government departments have approved the settlement clusters and municipalities are to guide the allocation of development capital expenditure, as these clusters are where most people would benefit. Based on the spatial distribution of the flagship projects from the economic development strategy and the settlement clusters from the Spatial Rationale, three other development corridors in the province were revealed: the Trans-Limpopo Corridor along the N1 national road bisecting the province, the Dilokong Corridor from Polokwane to Sekhukhune district, and the East-West Corridor from Polokwane via Lephalale to Botswana (DWAF, 2006:7; Limpopo Provincial Government, 2006; SALGA, 2006).

A key objective of the strategy is to improve the impact of poverty alleviation projects in Limpopo. Data and information related to poverty in the province has been collated, and the Local Economic Development (LED) initiatives of local government are regarded as its poverty alleviation mechanism. The LGDS confirms the provision of water and sanitation services as the key enabling infrastructure for both economic and social development, which enhance the quality of life and productivity of the workforce (DWAF, 2006:7, Limpopo Provincial Government, 2006, SALGA, 2006).

2.7.2 Population Spread and Socio-economic Status affecting the delivery of water services

The following categories of information that have been used to convey the status quo regarding the environment in which water resource management and water services delivery occur in Limpopo, as well as water related data specific to the province. Table 2.4, below, provides

clarity on the relative population size in the 11 Limpopo WSAs and indicates the province's Household Water Supply, as reviewed in December 2016. This is useful in identifying potential focus areas for further analysis, prioritisation and support (DWAF, 2006:13).

Table 2.4: Relative population size in Limpopo WSAs

Water Services Authority (WSA)	Population	Number below Basic Service	% below Basic Service
Capricorn District Municipality	710 000		
Polokwane Local Municipality	560 000		
Mopani District Municipality	1 098 000		
Sekhukhune District Municipality	1 137 000		
Vhembe District Municipality	1 371 000		
BelaBela Local Municipality	62 000		
Lephalale Local Municipality	101 000		
Modimolle Local Municipality	62 000		
Mogalakwena Local Municipality	350 000		
Mookgobong Local Municipality	26 000		
Thabazimbi Local Municipality	69 000		
	Total 5 546 000	**1 078 864**	**19%**

Source: Adapted from DWA, 2006

Consequently, the current status of the provision of free basic water in Limpopo province, as at November 2006, reads as follows:

Table 2.5: Provision of free basic water services

Municipality %	% Total Population Served	% Poor Population Served
Capricorn DM	87%	75%
Polokwane LM	48%	81%
Mopani DM	76%	57%
Sekhukhune DM	45%	52%
Vhembe DM	78%	67%
Waterberg DM	75%	91%
Total	**Total 71%**	**Total 69%**

Source: adapted from DWAF, 2006

Therefore, the targets of the Strategic Framework for Water Services (SFfWS), to address the backlogs in water services provision, have been determined and approved by Cabinet. The current levels of funding, delivery and capacity to implement projects indicates that the targets in the SFfWS are unlikely to be met in Limpopo unless significant new delivery methodologies are urgently applied (DWAF, 2006:19).

Household income distribution information is grouped into three income categories: at the lowest level, 55.6% of households have an annual income level below R1 633 per month. These households can be considered indigent, that is, to be living in absolute poverty, and will find it impossible to pay for services such as water, electricity and school fees. Almost 31% of households are in the intermediate category, with a maximum annual household income of R76 400 per year or R6 367 per month. Many of these households will be unable to pay the full cost of housing and other services, but should be in a position to make substantial contributions to the cost of their consumption. Less than 14% of households are in a position to pay the full cost of the services they consume. This information has important implications for the sustainability of infrastructure services and for the design of alternative ways in which households may be able to contribute to their consumption of public goods. Higher levels of job-creation and more constructive attitudes towards work will also improve this situation. By comparison, the proportion of households in absolute poverty in the country, as a whole, is considerably lower, at 44% (Limpopo Provincial Government, 2015).

There are still 102 000 households in Limpopo (7.2% of total) that have no sanitation facilities. Another 753 000 households (53% of the total) have pit latrines without ventilation. Although these services have improved considerably since 2001, the current service level is still below RDP standards. The improvement of sanitation services provides an important opportunity for low-income households to be encouraged to contribute towards the improvement of their own facilities (Limpopo Provincial Government, 2015).

2.7.3 The National Water Resource Strategy (NWRS) – underpinning the water resource strategy in Limpopo

Since 1994, Government policy has focused on equitable and sustainable social and economic development for the benefit of all South Africans. The National Water Policy for South Africa (NWP), adopted by Cabinet in 1997, was introduced with the objective of managing the

quantity, quality and reliability of the nation's water resources in order to achieve optimum long-term, environmentally sustainable social and economic benefits for society from their use (DWAF, 2006:9).

Three fundamental objectives for managing South Africa's water resources are:

- **To achieve equitable access to water**, that is, equity of access to water services, to the use of water resources, and to the benefits derived from the use of water resources.
- **To achieve sustainable use of water** by making progressive adjustments to water use with the objective of striking a balance between water availability and legitimate water requirements, and by implementing measures to protect water resources.
- **To achieve efficient and effective water use** for optimum social and economic benefit.

To realise the achievement of the NWP objectives, the following parameters apply:

- Water will be regarded as an indivisible national asset. National government will act as the custodian of the nation's water resources and its powers in this regard will be exercised as a public trust.
- The water required to meet basic human needs and to maintain environmental sustainability will be guaranteed as a right, whilst water use for all other purposes will be subject to a system of administrative authorisations.
- The responsibility and authority for water resource management will be progressively decentralised by the establishment of suitable regional and local institutions.

The National Water Act is the principal legal instrument relating to water resources management in South Africa; it contains comprehensive provision for the protection, use, development, conservation, management and control of South Africa's water resources. It is these legal provisions that enable the proposals in the NWP to be implemented (DWAF, 2006:9).

The integrated drives of the National Water Resource Strategy are identified as follows:

- The national framework for managing water resources - South Africa's water resources must be protected, used, developed, conserved, managed and controlled in accordance with the NWRS;
- The framework for the preparation of catchment management strategies - A catchment management strategy is the framework for water resources management in a water

management area. In this regard, an important component of the NWRS is to quantify water availability and water requirements in each water management area;

- Provision of information - to ensure that all aspects of water resource management that will affect other organs of State, water users and the public in general, are brought to their attention;

- Identification of development opportunities and constraints - Increasing understanding internationally that water resources can be successfully managed only if the natural, social, economic and political environments in which water occurs and is used are taken into consideration. Integrated water resources management (IWRM) may be defined as a process that promotes the coordinated development and management of water, land and related resources in order to maximise the resultant economic and social welfare in an equitable manner, without compromising the sustainability of vital ecosystems. IWRM therefore aims to strike a balance between the use of resources for livelihoods and conservation of resources in order to sustain its function for future generations, and to promote social equity, environmental sustainability and economic efficiency;

- The dimensions of integrated water resources management - Freshwater is a complex ecological system that has a number of dimensions. Surface water, groundwater, quantity and quality are all linked in a continuous cycle – the hydrological cycle – of rainfall, run-off from the land and infiltration into the ground, as well as evaporation from the surface back into the atmosphere. Each component may influence the other components and each must therefore be managed with regard to its interrelationship with the others. Water, as a system, also interacts with other systems. Human activities such as land use, waste disposal and air pollution can have a major impact on the quantity and quality of the water available for human use, while the abstraction and storage of water a well as the discharge of waste into water resources can impact on the quality of the natural environment. These interactions must be considered and addressed by water resource managers (DWAF, 2006).

Based on the Strategic Framework for Water Services (SFfWS), water is declared as life, and sanitation a dignity. All people living in South Africa should have access to adequate, safe, appropriate and affordable water and sanitation services, and are encouraged to use water wisely and practice safe sanitation. Effective, efficient and sustainable institutions that are accountable and responsive to those they serve provide water supply and sanitation services. Water services institutions reflect the cultural, gender and racial diversity of South Africa.

Water is used effectively, efficiently and sustainably in order to reduce poverty, improve human health and promote economic development. Water and wastewater are managed in an environmentally responsible and sustainable manner (DWAF, 2006:11).

2.7.4   Future water requirements

Many factors influence the requirements for water in the Limpopo province. These include the climate, the nature of the economy (i.e. irrigated agriculture, industrialisation and mining) and standards of living. Of these factors, the climate has in the past been a relatively stable factor while, in most cases, control can be exercised over the growth in demand for irrigation water and mining. However, population, standards of living and economic activity have their own inherent growth rates and each is dependent on a wide spectrum of external influences. Population and economic growth relate to socio-economic standards, and are therefore regarded as the primary determinants of future water requirements (DWAF, 2006:16).

According to Kettledas (2013:25), who conducted a mine surface water hydrology assessment in the Limpopo province, the objective is to ensure good practice in terms of managing both clean and dirty water that rises to the surface or is generated on the surface. In line with the DWA Best Practice Guidelines series (Van de Gieseen, 2017: 103), a surface water plan will be compiled by taking account of the elements required for the development of a Storm Water Management Plan (SWMP). This includes the assessment of the following issues: catchment objectives; management risk; water balance management; consideration of water conservation and water demand management aspects, that will address options for minimising water use; characterisation, at a generic level, of wastewater volumes and quality differentiation between waste process water and storm water; a holistic description of water quality and quantity requirements for different water uses of the project; and, monitoring the hydrological processes.

In terms of the quality of surface water resources, the quality of surface water run-off will deteriorate to even more dire levels if rainwater leaching out as surface flows or flows in

streams are in contact with man-made occurrences of coaliferous material, petro-chemical products and overdoses of fertilizer and organic compounds used in agriculture. As is evident from the sample taken from the fountain at Bergen op Zoom, and from the water quality data of the boreholes as shown in the groundwater report, the present water quality of the site is poor. High levels of chloride, sulphate and sodium, amongst others, occur due to the natural salinity of the groundwater, which is a feature of dry climates with low surface water recharge. In contrast, the quality of water flowing in the Limpopo River is good (Eksteen, 2009:29).

2.7.5 Basic sanitation progress

In 2009, the Department of Human Settlements took over the responsibility of the provision of sanitation from the DWA. Out of a total of 14.5 million households, there are currently 4.5 million households without access to basic sanitation facilities. Although there has been an improvement from 48% to 69% in terms of access to sanitation since 1994, in spite of the population increase, a great deal of effort is still required to accelerate the delivery of sanitation services (DWA, 2013). Therefore, the target date of 2014 for the eradication of backlogs will not be met without a significant financial injection combined with the appropriate project management skills. Political pressure to provide full waterborne sanitation, as a basic level of sanitation, has a severe impact on the cost of service provision and operation in certain parts of the country (DWA, 2013).

Since 1994, the DWA has embarked on an ambitious program to eradicate backlogs in water supply and sanitation, underpinned by the development of sound sector policy and legislation. The Water Services Act was promulgated in 1994, and defined the role of the DWA as regulator, the role of Water Boards as bulk providers, and the role of municipalities as service providers, while the National Water Act of 1998 redefined water rights in South Africa and established a new framework to mandate and regulate water resources. Initially, the water and sanitation delivery programme was driven by the DWA (DWA, 2013).

In 2003, the responsibility for service provision was transferred to local government, bringing with it the need to support and build capacity at this level. The Strategic Framework for Water Services was published to guide Water Services Authorities in carrying out their service provision role. In 2010, the DWA's emphasis shifted from support to regulation; the National Water Services Regulation Strategy was adopted and the Blue and Green Drop incentive-based regulatory processes were conceived. These have been implemented with a visible improvement in drinking water and wastewater quality. Much has been done to assist local government to effectively deliver on its mandate (DWA, 2013).

Since 1994, no less than 21.1 million people have benefitted from a basic supply of water. Similarly, 17.3 million people have received, at least, a basic level of sanitation. The DWA has met and exceeded the MDG targets. The DWA also developed and implemented the Free Basic Water Policy that ensures that the poor are not denied access to water due to financial constraints (DWA, 2013).

The DWA has continued to successfully manage the country's water resources and, in 2004, it published a National Water Resource Strategy. More recently, the DWA carried out its All Towns Studies, in which the water resources for every town were studied, compared to future requirements and a reconciliation strategy developed for implementation. The DWA is currently revising its National Water Resource Strategy and is amending both the Water Services and National Water Acts (DWA, 2013).

2.7.6 Water and Sanitation Sector Intergovernmental relations

Intergovernmental relations can be seen as a universal phenomenon. If seen in this light, intergovernmental relations are to be found wherever two or more governments interact in the development and execution of public policies and programmes (Elazar, 1987:16). As much as

the structures and processes of intergovernmental relations are predominantly found in countries with federal characteristics, they are also found in countries with unitary systems, such as Japan and the United Kingdom (Watts, 1998:3). Hence, according to Wheare (1963:227), what makes it essential that the relations between the different levels/spheres of government remain good for effective governance is the division of power between them. Cooperation, therefore, becomes necessary in order to ensure that the co-ordinated and complete administration of the divided fields is attained.

In countries with federal characteristics, it is inevitable that there will be overlaps and interdependence in the exercise by governments of their powers, which generally require the different orders of government to treat each other as partners in order to minimise conflict and to create an environment of adapting to changing circumstances (Watts, 1996:51). Intergovernmental relations, in every country with substantial federal characteristics, have both vertical and horizontal dimensions (Watts, 1996:53). That is, in addition to relations between the national government and the constituent unit governments, there are also inter-unit relations. Hence, intergovernmental relations in countries such as India, Malaysia, Australia and the United States of America have provided a degree of flexibility and scope for co-operation in areas where the Constitution provides for concurrent jurisdiction; South Africa's system of government falls into this category of countries.

Therefore, since, by definition, intergovernmental relations refer to relations between regional governments and national government, as well as between the different regional governments, the importance of provinces (constituent units) is self-evident. Constituent units or regional governments are also known as states or provinces in other countries (Sindane, 2011:2). The South African unitary constitution, as indicated by Sindane (2011:2), provides for not less than eighteen federal characteristics, all of which define relations between the national and provincial governments. These include a written constitution, which is regarded by a number of international scholars as a prerequisite for any state with substantial federal characteristics; the process for amending the constitution; a bicameral parliament, composed of the National Assembly and the National Council of Provinces; constitutional recognition of regional governments, that is, provinces in the case of South Africa; judicial arbitration or the

Constitutional Court, which presides over constitutional matters; self-rule by provinces (also contained in Schedule 5 of the South African Constitution i.e. exclusive functions for provinces); and shared rule/responsibilities between the provinces and the national government, which are predominantly contained in Schedule 4; the role of the National Council of Provinces, which is mainly to ensure that provincial interests are taken into account; provision for the autonomy of provinces, s40(1) of the South African Constitution; several provisions for the fiscal autonomy of provinces; separate legislative authority for provinces; permanence of provincial boundaries; and, the right of every province to write their own constitution.

According to Ismail, Bayat and Meyer (1997:137), any form of government, whether central, provincial or local, has as its objective the achievement of the general welfare of the community by satisfying its identified needs through rendering effective services. Intergovernmental relations between central, provincial and local spheres require, amongst other things, clear guidelines, effective communication and closer cooperation to achieve objectives that are stipulated in the Constitution of South Africa (Ismail, Bayat and Meyer, 1997:137). It has been the experience of most contemporary states that national government possesses have neither the knowledge nor the capacity to devote sufficient attention to the different sections of society; therefore, specific spheres of government have been established to provide services that are best provided by the appropriate spheres of government (Cloete and Thornhill, 2004:57).

Hence, intergovernmental relations are an important means through which co-ordination and co-operation amongst the different spheres of government can be developed. Furthermore, intergovernmental relations further implies that each sphere of government has its own functions and responsibilities, but interacts with the other spheres in order to ensure the effective and efficient implementation of policies and programmes (Ismail, Bayat and Meyer, 1997:138). With regard to the concept of cooperative government, Ismail, Bayat and Meyer (1997:139) also state that, since this term is closely related to intergovernmental relations, it is necessary to clarify what 'cooperative government' means in relation to local government.

Edwards (2008), in Kanyane (2016:95-96), proposes that intergovernmental relations are intended to promote and facilitate cooperative governance and decision making by ensuring that policies and programmes across all spheres and, transversally, in state departments, translate into service delivery in meeting the needs of citizens in an effective way. Weak intergovernmental relations and coordination are often problems of capacity and management, rather than problems borne from governance structures and procedures. The government, however, the question remains, has initiated various efforts – such as the establishment of intergovernmental structures, procedures and toolkits –: are these efforts sufficient to ensure that effective Intergovernmental Relations (IGRs) take place in all spheres and state departments?

Poor service delivery has resulted from a lack of skills, capacity (ability) and capability (competency). The failure by government – especially local government – has contributed enormously to widespread protests and demonstrations (Kanyane, 2016:96). According to Holness (2011), when community members are confronted with service-delivery challenges due to elected officials' slowness in delivering on their mandate, they express their concerns in community forums; when such efforts continue to deliver unfavourable outcomes, however, the frustrated communities then resort to protest action as a means of expressing their plight.

In this regard, the development and deployment of skilled and competent people – as opposed to employing cadres who are party loyalists – must be realised. Cameron (2010) argues that until the public service moves away from the ANC's cadre policy and development strategy, to merit-based human resources, the government will struggle to improve service delivery in a systematic fashion. Section 195 of the Constitution cautions that public administration at all levels of government should be governed by democratic values and principles; the efficient, economic and effective use of resources must be promoted; and that good human resource management and career-development practices must be cultivated to maximise human potential (Tshishonga and Mafema, 2012, in Kanyane, 2016:96).

Against this backdrop, Cameron (2010), in Kanyane (2016:96), writes that, generally, there is still a problem of poor skills levels in government due to growing politicisation, which is a major drawback to the capacities of the public service. The problem of poor skills includes contracted senior officials whose contracts are short-lived. Nengwekhulu (2009:352) argues, "to manage an organisation efficiently requires a multitude of skills ranging from communication, people management, institutional management and resource management skills". According to Tshishonga and Mafema (2012), in Kanyane (2016:96), service delivery in South Africa, especially at the local community level, is directly linked to the politics of distribution, which is focused on providing access to services previously denied or limited. The proper coordination of various structures is imperative for the entrenchment and deepening of intergovernmental relations at both the local government and community levels.

A case in point is the DWAS, which is exposed to structural intergovernmental challenges. In terms of the National Water Act (No. 36 of 1998), the management of water sources, including water access, is a shared competency, but why are water services authorities (WSAs) failing to deliver water to their communities? If a WSA is failing to pay or has high levels of erratic payment, why should the community suffer the repercussions of the poor leadership and management of the WSA? These repercussions include communities being exposed to soft water reductionism, that is, the so-called sanctions imposed by water boards against defaulting WSAs. This is another type of social exclusion, and should be condemned in the strongest terms as it violates human rights (Kanyane, 2016:96-97).

A clear example of this is the Bushbuck Ridge Local Municipality. According to the Bushbuck Ridge Water Board's *Annual Report* (2013), the municipality owed money to the Bushbuck Ridge Water Board. As a result of this, water delivery to the community became problematic, as the municipality was placed under financial administration in May 2013. It is clear that affected communities are caught in the intergovernmental interplay among the DWAS, water boards and WSAs, whereas communities in capacitated municipalities and with efficient water boards continue to enjoy quality services. These unparalleled and unequal water-quality levels – especially in treatment plants, bulk-water supply, reticulation and water-storage systems –

are unfortunate, as water is a right of all. This right must be progressively realised without being susceptible to the problems of ailing municipalities (Kanyane, 2016:96).

It has been reported by the Minister of Cooperative Governance and Traditional Affairs (CoGTA) that municipalities currently owe water boards an amount of R2 billion; this includes municipalities in all nine provinces. It seems that there are no proper measures to make indebted municipalities pay their arrears. An attempt to recover these monies from defaulting municipalities has been put in place, with the involvement of the DWAS, CoGTA, National Treasury, provincial departments of local government, water boards and WSAs. However, this stopgap austerity measure is not sustainable. The billing arrangements between the water boards and the WSAs, or municipalities, need to be reviewed and overhauled, as it is a recovery exercise costly to the defaulting municipalities, and will eventually frustrate service delivery at the expense of innocent communities. The same applies to all arrangements regarding monies owed by defaulting departments and municipalities to the power utility Eskom. Service-delivery decisions and their implementation should be made in the best interests and to the premium advantage of the communities, and not as a result of defaulting state departments, SOEs and municipalities working in silos (Kanyane, 2016:97).
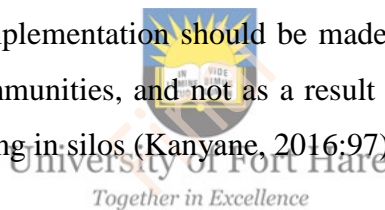
Overall, it cannot be considered normal to see communities fail to exercise their socioeconomic rights because of the failure of intergovernmental relations in the government and SOE sectors. According to former Chief Justice, Pius Langa, the provision of services to all and the levelling of the economic playing fields that were so drastically skewed by the apartheid system must be central to any concept of transformative constitutionalism (Langa, 2006, in Kanyane, 2016:97). Hence, it is not unknown for state departments to encounter socioeconomic rights litigation brought against them by social activists, simply due to the neglect the part of the state or contempt for the implementation of court decisions in progressively realising the needs and interests of society as enshrined in constitutional prescripts. Presumably, litigation could not only be reduced but it could become minimal if there are interdepartmental and transversal departmental commitments, including those from state departments, to jointly respond to service delivery challenges – as opposed to response work being done in silos across the spheres of government (Kanyane, 2016:97).

Kanyane (2016:97) further indicates that another typical example of intergovernmental complexities is the passing of the National Environmental Management Laws Amendment Act (No. 25 of 2014), publicly known as NEMLAA, which gave rise to one environmental system. By implication, the Department of Mineral Resources (DMR), the Department of Environmental Affairs (DEA) and the DWAS should work together in streamlining licensing processes for mining, environmental authorisations and water use. However, this is premature, as the practicality of this system remains to be seen. Municipalities are blatantly excluded from the mix of this so-called one environmental system, yet the same suite of environmental legislation and practices directly affects them. A further issue that is a bane to IGR is the poor attendance of high-ranking officials at IGR meetings and the frequent attendance by low-ranking officials who cannot make decisions at these high-level IGR meetings (Edwards, 2008).

The problems related to this issue are attested to by an empirical study's finding that key officials tend not to attend planning meetings; instead, they send junior officials who do not have the necessary information or decision-making authority (Frödin, 2009, in Kanyane, 2016:98), which renders intergovernmental relations completely ineffective, as they tend towards rule compliance rather than genuine commitment to and interest in achieving first-rate good governance. Furthermore, according to Frödin (2009), in Kanyane (2016:98), this occurs because there is generally little incentive for provincial departments to participate in the local sphere of government activities, or municipal integrated development planning for local government, to be precise. One could therefore argue that, if high-ranking officials do not take intergovernmental relations seriously, they are presumably reduced to an empty shell of formal structural and institutional procedures; this defeats their intended purpose of strengthening governance in order to fulfil the developmental outcomes of the state.

At present, South Africa presumably has a functioning system of intergovernmental relations, but it is largely dominated by the higher sphere of government based on authority, power and prescriptions typical of a unitary system of government (Edwards, 2008, in Kanyane, 2016:98). This top-heavy arrangement of the IGR leaves the local sphere of government burdened with

mammoth service delivery challenges. According to Edwards (2008), even though the Constitution makes provision for cooperative government as a partnership amongst equals, in practice, it is a top-down relationship. For example, members of executive council (MECs) frequently consider themselves more accountable to the national minister than to their own legislature. It now becomes clear why the Minister of Basic Education, Angie Motshekga, when under attack for the poor delivery of textbooks in the Limpopo province, was not able to demand full accountability from the MEC for Education and his head of department, as both were accountable not to her but, instead, directly to the Premier and, ultimately, to the Limpopo provincial legislature (Kanyane, 2016:98).

At some point, intergovernmental relations can be complex, but if they are properly interfaced and interplayed, they can yield fruitful results. On the one hand, South Africa needs to strike a balance between the importance of culture, social cohesion and social bonds in managing IGR and, on the other hand, a rational degree of flexibility to adapt to a politically charged society. In a democracy, the authority of public officials and of institutions depends in part on the extent to which the public has confidence and trust in these officials and institutions. In the last 20 years, that confidence has declined markedly, due to ideological polarisation, which, in turn, has its roots in the expansion of political participation. Confidence and trust were lost mainly because government policies failed to match what people expected; thus the low turnout of voters in the 2009 election and the 2014 election of (Nkondo, 2014, in Kanyane, 2016:98-99).

Yet another cause of disagreement, as indicated by Kanyane (2016:99), is oversight within intergovernmental relations, or the doctrine of separation of powers. In principle, in terms of the separation of powers, the legislature of the national government and provincial government has oversight over the executive. The same also applies to the municipal council, which has oversight over the administration of the municipality. However, in situations where the President, the Premier or the Mayor is the chairperson of the branch of the ruling party, the responsibility of the speaker or legislature as a whole, for oversight of the administration of the national government, provinces or municipalities is compromised. Furthermore, the doctrine of separation of powers is one of the cornerstones of South Africa's constitutional democracy because it regulates the exercise of public power. However, this principle does not detract from

the duty of courts to grant effective remedies where rights are being flouted. For the purpose of litigation, in respect of socioeconomic rights, the most important constraint on the discretion of the courts is their inability to step into the domain of the other branches of government because of the doctrine of separation of powers (Kanyane, 2016:99).

Edwards (2008), in Kanyane (2016:99), submits that the separation of powers and intergovernmental conundrum is in fact about the management of powers and functions for effective service delivery, especially at the municipal level. For example, it is important to note that there is an opaque line of distinction between the municipal council and the executive, as the municipal council contemporaneously serves as the legislature and the executive. Edwards (2008) succinctly explains that, in terms of legislation that impacts upon intergovernmental relations, the mayor of a municipality is the key political office bearer responsible for IGR, and he/she also drives the preparations and implementation of the municipality's budget; this can been seen as another important activity in terms of intergovernmental relations, but also promotes an unwelcomed 'player–referee' binary in its oversight and implementation function. The role of a mayor as political office bearer and municipal manager as an executive is overly politicised and contested terrain. The separation of powers and power relations in the local sphere of government needs to be further clarified in order to provide a stark distinction between the legislature, the executive and the judiciary, as is evident in the national sphere of government.

A study conducted by the Financial and Fiscal Commission (FFC), cited in Kanyane (2016:99), established that local government performance is uneven not only because of capacity constraints but, more importantly, as a result of tensions in intergovernmental roles and responsibilities, the political-administrative interface, high vacancy rates and instabilities in administrative leadership, skills deficits, poor organisational design, inappropriate staffing, low staff morale and poor accountability for performance (FFC, 2012:2). Against this backdrop, it is prudent to emphasise that service-delivery protests and failures may not be reducible to matters of IGR and mere governance. They may include infinitely complex political behaviours, power relations and difficulties that the government experiences in meeting

complex democratic demands due to the existence of a single-party-majority government in a multiparty democracy.

Another case in point, according to Kanyane and Koma (2014), is the intergovernmental relationship between traditional leadership and municipalities; these are often marred by conflicts resultant of questions related to succession, land and service-delivery. It is on record that South Africa has three spheres of government; however, is traditional leadership regarded as an appendage of local municipalities, or part thereof, embedded in the institutional structure of government, or is it considered a civil-society structure or movement? Kanyane and Koma (2014) further suggest that traditional leaders are caught in the quagmire that lies between traditionalism and modernity operating on an imported, Western model of governance. Do the Traditional Leadership and Governance Framework Act (No. 41 of 2003) and the IGRFA provide contrasts or symbiotic synthesis between local authorities and traditional authorities? This is a contentious issue, which remains unresolved as, currently, there are parallel administrations, duplications and paradoxes in roles between the two authorities. These are present due to intergovernmental ambiguities between local authorities and traditional leaders. This is because the Constitution states that 'national legislation *may* provide for a role for traditional leadership as an institution at local level on matters affecting local communities' (section 212(1); emphasis added); however, by interpretation, the clause suggests that the role of traditional leaders is an ambiguous constitutional afterthought (Kanyane, 2016:100).

A further issue related to the potential to interpose IGR is the coalition. Such as coalation, local government predicted in South Africa by Kanyane (2016: 102) after the 2016 local government elections that would have implications for the way municipalities are to be administered. A coalition, according to Bristow (2014), in Kanyane (2016:102), can be explained as different groups making a decision to work together against a common opponent or for a particular reason. The formation of coalitions could contribute towards strengthening multiparty democracy with little to no ruling-party dominance. Coalitions could mean that political power is shared amongst opposition parties, as the ruling party fails to command a majority of seats after elections; such coalitions could bring about a robust legislature, oversight, governance and accountability in local, provincial and national spheres of government.

Kanyane (2016:103) proposes that strengthening the technical-resource capacity of institutions through the robust systematic and continuous training of officials to promote effective IGR in the different spheres – especially that of local government – is of critical importance. This includes training in the management of politics, coalitions, factions and factionalism, power relations and cultural dynamics (which specifically seems to be lacking). Social cohesion and exclusion, gender and diversity mainstreams, as well as cultural inclusions and exclusions may be critical technical competencies in a consultative and participative democracy.

2.7.7   Challenges to sustainable service delivery

The Department of Water Affairs has identified the following challenges in South Africa, which subsequently affect Water Services Authorities in the Limpopo province:

- There is no surplus water in South Africa; the available water resources are at their limit and climate change will worsen the situation.
- Due to water scarcity, all pollutants and effluent streams will increasingly need to be treated to ever-higher standards before being discharged.
- A study of 905 towns, excluding metros and large cities, found that 28% have inadequate water resources.
- Water has to be distributed over large areas and difficult terrain, at high cost, in order to service the remaining needs.
- Waste Water Treatment Works are generally in poor condition and many are over capacity, which will increase environmental health risks.
- Municipal water consumption per capita is unacceptably high.
- There is a lack of water demand management, and in efficient water use, across the sector.
- There is a lack of capacity, technical capacity in particular, within WSAs and especially about infrastructure asset management; as a result, infrastructure fails and service delivery suffers.
- Many municipalities are unable to provide sustainable services or run a successful WS business due to a lack of capacity and skills (DWA, 2013).

2.7.8 Environment and Green Economy

The Limpopo province has the potential to be a national pioneer in the Green Economy. Soundly managed, the natural environment will provide drinkable water, breathable air, energy, food, and all other requirements for human life. Poorly managed, the ability of natural systems to function will be impaired. Limpopo has a comparative advantage in several resource-based industries. These industries have a major environmental impact and need to be carefully managed in order to avoid disruptions. They are water intensive, with water being a scarce resource in most parts of the province. Limpopo is rich in biodiversity and has three national centres of endemism (Soutpansberg Centre, the Wolkberg Centre, and the Sekhukhune Centre). These systems are under pressure, and require conservation, to protect the provincial biodiversity and ecosystems. The top three national biodiversity conservation priorities are in Limpopo. A biodiversity map has been compiled for the province, which describes the compatible and incompatible land uses associated with each biodiversity category (LDP, 2015).

Limpopo Department of Economic Development, Environment and Tourism (LEDET) will play a convening and co-ordinating role with all stakeholders in order to implement the provincial Green Economy Strategy and to rollout Special Infrastructure Project (SIP) on Green Energy. During this MTSF period, specific emphasis will be placed on waste recovery, alien vegetation control, solar power plants, water conservation and green settlement design principles. The Green Economy Unit in the LEDET will use the 2013 Provincial Green Economy Plan to compile detailed implementation action plans for these priorities. The Green Economy Unit will also be responsible for driving the provincial electricity risk mitigation strategy by way of new solar photovoltaic projects, as well the promotion of a co-generation and provincial electricity conservation campaign (LDP, 2015).

The Limpopo Growth and Development Strategy (LGDS) is therefore aimed at providing the province and all its stakeholders, namely, the private sector, non-governmental organisations, parastatals, the international community, and the population at large, with both a vision and a pathway for development. Following the motto 'Development is about People' it goes without saying that a development strategy of this nature involves all three spheres of government and all government departments. These include key departments such as Safety, Security and

Liaison, Finance and Economic Development, Health and Welfare, Transport, Environmental Affairs and Tourism, Education, Trade and Industry, Land Affairs, Agriculture, Minerals and Energy, Water Affairs and Forestry, as well as all municipalities and their Integrated Development Plans (IDPs). Being multi-faceted, this strategy is the result of a ten-year process following the country's first democratic elections in 1994; it comprises the outcome of an inclusive and co-operative process in which many have been involved. As a result, significant milestones in the development path of the province have been reached and, given the extent thereof, a brief summary is warranted.

2.8 GAPS IN EXTANT LITERATURE

While the general service delivery glitches for the provision of water and sanitation to citizens by WSA have been canvassed in the literature, there had been a paucity of specific and up to date information on key barriers. Most of the studies cited here date back before the large-scale land grabs by citizens on the pretext of land occupation. The institutional arrangements of key stakeholders; the national government, provincial government, district municipalities, local municipalities, pertaining to the provision of water and sanitation services to citizens have significantly shifted. These shifts are consequently explained by the advent of the Intergovernmental Relation (IGR). There is limited data on what impact the IGR has had on the policy-making and implementation process on the provision of water and sanitation issues.

Additionally, the introduction of the ministry of monitoring and evaluation in the office of the presidency and its actors never responded positively towards the provision of basic service such as water and sanitation issues. It remained an issue unsettling civil societies in different municipalities especially on informal settlements and rural areas. Based on the studies conducted by Mukonoweshuro, T.F. 2014; Goldin, J. 2005; Motingoe, P.S. 2012 and Netshipale, LL. 2015, they neglected to focus on the importance of the IGR and the implementation of Government-wide Monitoring and Evaluation System (GWM&ES) linking it to complex provision of basic services such as water and sanitation was neglected. Thus this research delves into the endlessly changing relationships between WSAs, WSPs and the Department Water Affairs central in decision-making processes regarding the provision of

water and sanitation services to civil societies and the role played by politics during a defined period of time.

It is highlighted in this study that the South African Government has adopted the principles of outcomes-based governance at the beginning of the current electoral cycle in 2009. The approach has further brought significant implications on the capacity of municipalities. As the new approach of governance emerges, a differentiated approach to national and provincial intervention for municipal support is also required. The study argues that the GWM&ES should be such a mechanism to facilitate effective intergovernmental support to municipalities.

In the main, an upsurge of irregular settlements by citizens in different local municipalities throughout the country had been captured. Surprisingly, even though such reports provide information on the mushrooming of informal settlements, needs for water and sanitation specifics on the policy process followed by government on the provision of water and sanitation are scant. All institutions responsible with the provision of water and sanitation are usually caught-up in violent service delivery protest. These displays lack of co-ordination, unavailability of intergovernmental relations and slant monitoring and evaluation of service provisions to citizens.

2.9 CONCLUSION

In the overall theoretical exposition, there has been notable progress in water supply and sanitation provision internationally, regionally and nationally, along with UN SDGs, Africa Agenda 2063, NDP 2030 and LGDS. This progress has, however, been disparate. Therefore, only specific areas that have previously had favourable access to improved services, with sustainable water and sanitation infrastructure maintenance, are still enjoying access to such services throughout the world. In South Africa, areas such as the Western Cape, Gauteng and the metros, show similar progress in specific municipalities, however, the majority of the municipalities with informal settlements and rural characteristics are currently struggling due to the lack of water services and sanitation.

Therefore, the Limpopo, KwaZulu-Natal and Mpumalanga provinces, which are largely characterised by the creation of homelands and deliberate underdevelopment by the apartheid state, have the municipalities with the greatest growth in access to improved water supply services and sanitation provision; they also house the municipalities with the greatest decline in access to both improved water supply and sanitation services. This disparate progress means that inequalities in access to improved services will persist.

The ensuing chapter of this study outlines the methodology and approaches employed in the study.

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CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The preceding chapter provided a literature review pertinent to the focus of this study, together with an overview of all public institutions that have a mandate to provide water and sanitation services. However, all research is based on some underlying philosophical assumptions about what constitutes 'valid' research and which research method are appropriate for the development of knowledge in a given study. In order to conduct and evaluate any research, it is therefore important to know what these assumptions are. This chapter discusses the philosophical assumptions and the design strategies underpinning the study. The chapter describes the research methodology employed in this study, and the approaches considered herein. Babbie and Mouton (2001:647) describe the methodological approach as the research method that relates to protocol, procedures as well as methods that are engaged in during the execution of the investigation strategy or enquiry design, over and above the fundamental philosophies and expectations that lie beneath their usage. Henning (2004:36) depicts research methodology as an articulate collection of techniques that harmonises each other and that encompasses the capability of fit, in order to distribute statistics and results that mirror the inquiry and agree with the investigator.

Consequently, 'methods' refers to the rationale for the application of specific procedures or techniques used to identify, select and analyse information in order to understand the research problem, thereby, allowing the reader to critically evaluate a study's overall validity and reliability. The research methodology employed in this study brings about the following strategic machineries: qualitative research approach, exploratory research design, population, sampling, data collection and data analysis.

3.2 RESEARCH PARADIGM

The term paradigm has been understood differently by various scholars. MacNaughton, Rolfe and Siraj-Blatchford (2001) explain that a research paradigm comprises three elements: a belief about the nature of knowledge, a methodology and criteria for validity. Whereas, Neuman (2000) and Cresswell (2003) refer to the paradigm as: epistemology or ontology, or even research methodology. In different understandings, Mackenzie and Knipe (2006) classify variable theoretical paradigms as positivist (post-positivist), constructivist, interpretivist, transformative, emancipatory, critical, pragmatism and deconstructivist, postpositivist or interpretivist. In the postpositivist paradigm, the philosophy is determined by cause and effect (Creswell, 2003). In contrast, interpretivist researchers understand "the world of human experience" (Cohen and Manion, 1994: 36). Consistent with Cohen and Manion's view, Creswell (2003); Yanow and Schwartz-Shea (2011) claim that interpretivist researchers discover reality through participant's views, their own background and experiences. In a minor scope, this paper does not aim to investigate all sorts of research approaches and methods, instead, it mainly focuses on the interconnection between interpretivism and qualitative methods in the field of local municipality. Hence, Miles and Huberman (1994:10) posits that qualitative data is well suited for locating the meaning individuals place on events (apparel purchasing), processes (perception forming and adoption process), and structures (scripts) and connecting these meanings with the social world around them. Taking the research-problem statement, objectives and sub-objectives formulated for the present study into account, a qualitative research style was selected as the most suitable research style to explore and describe examining the capacity of Limpopo Water Service Authorities in providing access to clean drinking water and decent sanitation.

3.3 QUALITATIVE RESEARCH APPROACH

Qualitative methods are typically flexible, that is, they allow greater spontaneity and adaptation of the interaction between the researcher and the study participant. Qualitative methods ask mostly "open-ended" questions that are not necessarily worded in the same way for each participant. With open-ended questions, participants are free to respond in their own words, and these responses tend to be more complex than simply "yes" or "no" (Mack, Woodsong, MacQueen, Guest and Namey, 2011:2). According to Burns and Grove (2003:356), qualitative research refers to inductive, holistic, emic, subjective and process-oriented methods used to understand, interpret, describe and develop a theory on a phenomenon or setting. It is a

systematic, subjective approach used to describe life experiences and give them meaning. Caelli, Ray and Mill (2003:11) assert that the central aim of the qualitative research approach is to develop knowledge by investigating how human beings construct the development of knowledge from their subjective interaction with their lived world, which reflects the principles of that knowledge.

In addition, Mason (2002:1) states that qualitative research is exciting and important as it is a highly rewarding activity because it engages researchers with things that matter, in ways that matter. Through qualitative research, researchers explore a wide array of dimensions of the social world, including the texture and weave of everyday life, the understanding, experiences and imaginings of the research participants, the ways in which social processes, institutions, discourses or relationships work, and the significance of the meanings that they generate. This can be done qualitatively by using methodologies that celebrate richness, depth, nuance, context, multi-dimensionality and complexity, rather than being embarrassed or inconvenienced by them. Instead of editing these elements out in search of the general picture or the average, qualitative research factors them directly into its analysis and explanations. This means that it has an unrivalled capacity to constitute compelling arguments about how things work in particular contexts. Moreover, Mack, Woodsong, MacQueen, Guest and Namey (2005) assert that the qualitative approach is a method that seeks to provide information about the "human" side of an issue – that is, the often-contradictory behaviours, beliefs, opinions, emotions and relationships of individuals. Furthermore, it seeks to understand a given research problem or topic from the perspective of the local population it involves.

In relation to the affirmations of Mason (2002:1) and Mack, Woodsong, MacQueen, Guest and Namey (2005), this study considered an examination of the capacity of the Limpopo Water Services Authorities to provide access to clean drinking water and decent sanitation, as a product of human behavior, in that once institutional and human capacity ideas in Water Services Authorities (WSAs) are properly implemented in the local municipalities, presumably, the delivery of quality drinkable water and decent sanitation to citizens would be improved. Sections 24 and 27 of the Bill of Rights in the Constitution (RSA, 1996) grant specific rights to access to sufficient water, an environment not harmful to one's health and well-being, and the protection of the environment from degradation. The right to basic sanitation is not an explicit constitutional right. However, the right to sanitation could be derived from the right to a clean environment if read together with the right of access to clean

water. Maintaining a balanced life with realistic access to services. Babbie and Mouton (2002:270) posit that the focus of qualitative research concerns itself with real events, real contexts, and real time, in a natural setting. It is for this reason that the qualitative approach was used to analyse eventualities and contexts in order to understand the social action and perspectives of insiders from their own point of view.

Auriacombe and Webb (2006:592) state that the "qualitative research methods used in social research include observations, in-depth interviews, focus groups and the analysis of personal documents. These methods were designed to understand the meanings people assign to social phenomena and to elucidate the mental processes underlying behaviors". The most appropriate qualitative data collection method to adopt in this study was the in-depth interview, as interviews solicit experiences and opinions of the participants. As such, the in-depth interviews employed in this study collected data from well-informed participants regarding the challenges pertaining to water and sanitation. In order to do this, a case study approach was employed to analyse the data; this is discussed in detail below.

3.4 RESEARCH DESIGN

Bhattacherjee (2012:35) gives a concise explanation of a research design when he refers to it as a "…. comprehensive plan for data collection in an empirical research project''. Research design is a detailed plan of action for gathering data for a scientific research. Bhattacherje (2012) argues that the data collection process alone does not constitute research design. He points out that a research design is made up of "…. data collection process, the instrument development process and the sampling process'' Bhattacherjee (2012:35). Thus a good research plan must explain how participants are chosen, how research tools are developed and used as well as how data are gathered.

To add onto that research design is the plan and structure of the strategy that the study uses to gather evidence that helps answer the research question(s) (McMillan and Schumader 1993). Another informative description of a research design is given by Blanche et al (2006: 57) who say that it is a …. plan for action that is developed by making decisions about four aspects of research: the research paradigm, the purpose of the study, the techniques to be employed and the situation within which observation will take place. Blanche et al (2006: 57) It can be

concluded from the above literature that research design refers to the research blue print informing the choice of research paradigm, participants and other sources of data as well as procedures for data collection instruments, data gathering, editing, analysis and reporting. An empirical research requires a good research design.

- **Case Study**

Creswell (2003:15) defines a case study as the process by which a "researcher explores in depth a programme, an event, an activity, a process, or one or more individuals". Leedy and Ormrod (2001) add to this definition by indicating that a case study should have a defined time frame. The case study can focus on either a single case or a case bounded by time and place (Creswell, 1998). Leedy and Ormrod (2001) provide several examples of various types of case studies from different disciplines, such as a medical research studying a rare illness (event) or political science research on a presidential campaign (activity). Leedy and Ormrod (2001:149) state that case studies attempt to learn "more about a little known or poorly understood situation". In terms of the development and presentation of a study, Creswell (1998) suggests that the structure of a case study should be: the problem, the context, the issues, and the lessons learned. Data collection for a case study is extensive and draws from multiple sources, such as direct or participant observations, interviews, archival records or documents, physical artifacts, and audiovisual materials. The researcher must spend time on-site interacting with the people being studied. The report would include lessons learned or patterns found that connect with theories.

For this study, the occupants of both political and administrative offices of the WSAs in Limpopo were engaged with concerning the challenges they incurred in their respective areas, in relation to the level of provision of basic services, specifically that of water and sanitation services. As the case study is one of the research strategies employed in this study, the researcher conducted an investigation into the real life situations with which the targeted participants find themselves, as this would place them in a position to provide constructive feedback as to how the lack of water and sanitation services has impacted upon their lives. Christensen (2007:51) argues that the advantage of the case study is that it provides a fertile breeding ground for ideas, hence, the choice of this method was deemed appropriate.

3.5 POPULATION

A population consists of individuals who fit the description of the research phenomenon and to whom the analysis and specific conclusions drawn by the researcher would apply (Welman, Kruger and Mitchel, 2008:52). Hence, Bless and Higson-Smith (1995:87) state that the target population is the set of elements that the researcher focuses upon and to which the results obtained by testing the sample should be generalised. They further state that it is essential to describe the target population accurately in order to collect and obtain relevant and valid information.

Babbie and Mouton (2006:124) define a population as "a cluster of basics on which the sample is essentially designated". In addition, Bryman (2008:697) defines population as the universe of units from which a sample is to be selected. Katzenellenbogen, Joubert and Karim (2001:74) describe the study population as the source population from which cases and controls are selected. Welman and Kruger (2003:46) maintain that the populations that attract human behavioral scientists are usually so huge that, from a realistic standpoint, it is plainly unfeasible to carry out an investigation on every single one of them. The target population for this study included different categories of senior political and administrative office bearers of the five WSAs in the selected district municipalities in the Limpopo province, namely, executive mayors, mayoral committee members, speakers, municipal managers, directors (Section 56 Managers). In addition, the five implementers of water provision, namely, eleven community members from various districts of Limpopo (see Table 3.1 below) were also targeted for this study. The study population is described in terms of people, place and, where relevant, time. The target population also consists of middle and senior managers (directors, deputy directors, and managers) from the Water Services Authorities in the Limpopo province.

3. **Sample**

It is often not possible to collect data from the entire study population; therefore, a representative sample must be selected, from whom data will be collected (Govender, Mabuza, Ogunbanjo and Mash, 2014:2). In order to provide a sample, the target population should be described. A sample is a subset of the population that is chosen based on its ability to provide information relevant to that population, its representativeness of the population under study,

and/or factors related to the feasibility of data gathering, such as cost, time, participant accessibility, or other logistical concerns (Utexas, 2007). Walliman (2006:213), however, simply defines a sample as a small part of the whole population selected to show what the whole is like. There is no widely accepted figure for the sample size, nonetheless, the size of the sample in qualitative research should not be too small to achieve data saturation or too big to make it complicated (Onwuegbuzie and Collins, 2007:289). Moreover, Maree (2007:79) states that criterion sampling implies that the researcher decides at the design stage of the study about the typical characteristics and number of the participants to be included. This implies that the researcher selects participants for a particular study as he/she deems that those individuals are in the best position to make available the information required for such an inquiry.

Purposive sampling is defined as a non-random sampling technique in which the researcher uses a wide range of methods to locate all possible cases of a highly specific and difficult to reach population (Neuman, 2011:267). Purposive sampling allows the researcher to select a sample based on his or her own knowledge of the population (Babbie and Mouton, 2001:167). Purposive sampling is appropriate when selecting unique cases that are informative and when conducting in-depth investigation. Cases selected in purposive sampling therefore rarely represent the entire population (Neuman, 2011:267). According to Maree, Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Jansen, Niewenhuis, Pietersen, Plano-Clark and Van der Westhuizen (2009:79), sampling refers to the process used to select a portion of the population for study. Brynard and Hanekom (2006:54) define sampling as a technique employed to select a small group (the sample) with a view to determining the characteristics of the larger group (the population). Population is the object of research and consists, amongst other things, of individuals, groups, organisations, events or the conditions to which they are exposed (Fox and Bayat, 2007:51).

Kumar (2005:164) writes that a 'sampling method' is the process of selecting a few samples from a bigger group to become a basis for eliminating or predicting the prevalence of an unknown piece of information, situation or outcome regarding the bigger group. Purposive or judgmental sampling, as a form of non-probability sampling, was used in this study. Hence,

Bless and Higson-Smith (2000:92) posit that this sampling method is based on the judgment of a researcher regarding the characteristics of the population. Babbie (2007:179) concurs by indicating that sometimes it is appropriate to select a sample on the basis of knowledge of a population and the purpose of the study.

Based on the foregoing discussion, purposive sampling was employed in order to select the sample for this study. Babbie (1995:225) observed that purposive sampling is the selection of a sample because of the researcher's own knowledge of the population, its elements and the nature of the research aims. Maree et al. (2009:79) point to the fact that purposive sampling simply means that participants are selected because of a set of defining characteristics that make them the holders of the data needed for the study. Sampling decisions are therefore made for the explicit purpose of obtaining the richest possible source of information in order to answer the research questions. Kumar (2005:179) also notes that the primary consideration in purposive sampling is the researcher's judgment as to who can provide the best information in order to achieve the objectives of the study. In addition, purposive sampling allowed the researcher to select key informants who were most suitable to provide the information required for the study. Some researchers view purposive sampling as a technique that is used with a specific purpose in mind (Neuman, 2010:219; Morra, Imas and Rist, 2009:272).

As a result, the researcher obtained data from respondents who were likely to have and share the required information. The participants were chosen on the basis of their experience of the delivery of basic services; the selected key informants were made up of executive mayors, municipal managers, technical directors, managers for water and sanitation, and community members. The idea has been to access evidence regarding the experiences of various categories of political and administrative office bearers pertaining to the provision of water and decent sanitation to communities, by WSAs, of the Limpopo province. The Water Services Act, 108 of 1997 (DWAF, 1997) prescribes the legislative duty of municipalities (district municipalities) as water services authorities to provide water supply and sanitation according to national standards and norms. These municipalities have been given the right to assume the role and function of Water Services Authority by the Minister of Water and Environmental Affairs. The respondents appraised in this study were "information rich" about the phenomenon, given their

lived experiences in the municipalities selected (Seale, Gobo and Silverman, 2004:448; Johnson and Davis, 2010:253). The sample size for the study was drawn from the population outlined above, and comprised of the following participants:

Table 3.1. Purposive sampling method

Water Services Authority[WSA] in Limpopo Province	Municipal Managers	Directors	Councilors	Community Members	Total
Capricorn District WSA	1	1	2	1	5
Polokwane Municipality WSA	1	1	2	1	5
Mopani District WSA	1	1	2	1	5
Sekhukhune District WSA	1	1	2	1	5
Vhembe District WSA	1	1	2	1	5
BelaBela Municipality WSA	1	1	2	1	5
Lephalale Municipality WSA	1	1	2	1	5
Modimolle Municipality WSA	1	1	2	1	5
Mogalakwena Municipality WSA	1	1	2	1	5
Mookgobong Municipality WSA	1	1	2	1	5
Thabazimbi Municipality WSA	1	1	2	1	5
Grand total	**11**	**11**	**22**	**11**	**55**

Table 3.1 provides an indication of the sample size by outlining the number of respondents that the researcher selected through the use of the purposive sampling method. For this study, the sample consisted of 55 key participants.

3.6 DATA COLLECTION METHODS

3.6.1   Semi-structured interviews

Semi-structured interviews consist of several key questions that help to define the area to be investigated in the study. This approach further allows the researcher and respondents to diverge from the list of questions in order to pursue an idea or response in detail (Gill, Stewart,

Treasure and Chadwick, 2008:291-295). May (2002:204) presents the opinion that in-depth interviewing allows researchers to formulate their research problem in a variety of ways. May (2002:204) further states that individual interviews provide an opportunity to examine how large-scale social change and transformation are experienced, interpreted and ultimately shaped by the responses of strategic social factors. In addition, effective interviews need to guide responses in an orderly fashion and within a period. A carefully constructed interview guide is needed to collect information in a manageable form for later analysis. In-depth interviews should always leave room to discover the unexpected and uncover the unknown. In addition, Joseph, Barry, Money and Samoel (2003) write that semi-structured interviews consist of a set of prepared questions and/or measures that guide the researcher and the respondents.

Hawkins (2003:234) describes an interview as a formal meeting with someone to ask him/her questions or to obtain information from the informants. Saunders, Lewis and Thornhill (2003) argue that the layout of questions in a semi-structured interview schedule should be attractive and kept simple in order to encourage the respondents to participate. In this study, the researcher used semi-structured interviews to obtain the primary data used in the study. The choice of this approach is premised on the fact that semi-structured interviews provide a deeper understanding of social phenomena by considering each respondent's views, beliefs and motivations in relation to the subject of the study (Gill, Stewart, Treasure and Chadwick, 2008:291-295).

A total of 55 interview requests were sent out to 11 Water Services Authorities in Limpopo, for various informants, using the sampling technique described earlier in this chapter. As a result, a total of 44 interviews with an average duration of 35 minutes each were conducted. This corresponds to a relatively high response rate, that is, 80 percent. The 11 participants who did not honor their appointments were politicians, primarily executive mayors and some municipal managers, despite the fact that appointments were secured with all the informants through their personnel assistants and office managers. The geographical dispersion of the participants and their tight schedules, in many instances, rendered it difficult to obtain a more intimate, face-to-face setting. The study area is highly politicised and the majority of the participants were skeptical due to the political uncertainty in all WSAs. Unlike quantitative

research that aims to quantify or count the number of items or people who share particular opinions, the aim of qualitative research is to explore the range of opinions and diversity of views in order to collect "rich information". The number of participants required for qualitative research therefore depends on the nature of the research and how many participants are needed in order to answer the research questions. The focus is generally not on sample size but rather on sample adequacy because generalisability is not what one is aiming for. Hence, the adequacy of sampling is usually justified when the researcher reaches the point of "saturation" (Bowen, 2008), which is used by researchers as an indication of quality (Guest, 2006).

3.6.2 Documentary reviews

Documentary reviews focus on all types of written communication that shed light on the incident being investigated; they comprise of both primary and secondary sources. Examples of these sources are: published and unpublished documents, company reports, letters, memoranda, agendas, faxes and newspaper articles (Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Nieuwenhuis, Pietersen, Plano Clark and van der Westhuizen, 2007:82). Furthermore, Yen (2003:106) asserts that documentary data could take many forms, such as memoranda, letters, administrative documents, proposals, minutes of the meetings, written reports, newspaper clippings, progress reports and additional artefacts emerging in the mass media or the communal newspaper. For these source documents are important to any case study or statistical analysis.

Furthermore, for Trochim and Donnelly (2007:146), documentary reviews are instruments of data collection; they involve a critical assessment and summary of a range of past and contemporary literature in a given area of knowledge. Documentary reviews help the researcher to: sharpen the problem, reformulate the problem, define other closely related problems, provide for proper understanding of the problem, acquire the theoretical and real-world knowledge needed to examine the problem, and show how the problem under study relates to previous studies (Morrel 2013:1; Welman, Kruger and Mitchel, 2005:151; Mogalakwe, 2006:221-230).

For the purpose of this investigation, the researcher employed documentary reviews of both primary and secondary sources in order to obtain past and contemporary literature pertinent to an examination of the provision of drinkable clean water and decent sanitation to citizens. The primary sources consulted for this study include official government documents, such as the 2011/2012-2016/17 IDP, 2011/2012-2016/17 SDBIP and 2011/2012-2016/17 Reports of the Auditor General, as well as Audit Opinions. The secondary sources used in this study include academic journals, articles and books on the provision of water and sanitation service delivery. The choice of these documentary sources were premised on their usefulness in providing information relevant information from them.

As expected, it proved difficult to schedule appointments with the senior political and administrative officials of the local municipalities or WSAs. The researcher changed the interview schedule several times due to the unavailability of the participants, thus, it took the researcher five months to collect the data. However, the researcher had to collect the data through face-to-face interviews with the participants in a highly political setting, within the context of the recently held local government elections on 3 August 2016. Therefore, the researcher had to seek permission and speak to political leaders or deployed cadres (management officials) in order to conduct the interviews. With the new political leadership on board, there was significant pressure on municipal managers, who were skeptical about giving the researcher permission without the endorsement of the Mayor.

Given that the local sector is highly politicised and contested coalition terrain, it proved difficult to access coalition municipalities, especially the Thabazimbi Local Municipality. A coalition government, comprised of the opposition parties, RPA (Rate Payers Association), EFF (Economic Freedom Fighters) and DA (Democratic Alliance), is governing the municipality. The ANC now is the opposition party. There was a significant amount of tension, as the staff in each office the researcher entered seemed reluctant to assist the researcher. Thus, given that gatekeeping and entry was complicated in terms of accessing the participants, consultation with different political hierarchies could not be overlooked. Hubbell (2003:10) clearly illustrates this point: "in partially free or un-free circumstances, participants share their

experiences with extreme caution". The participants in the current study were very reserved when delivering their responses.

In other municipalities, the interview schedule was thrown off course due to some study participants missing the scheduled appointments. Since beggars are not choosers, two things had to be done with urgency: first, inform the participants about the researcher's predicament; second, make new appointments in lieu of the cancelled meetings. The researcher had to devise other means, such as calling on his political connections, in order to access the participants. As an employee of a municipality (different one from those under study), the researcher requested that the mayor and the municipal manager communicate with their colleagues in order to assist the researcher in accessing the participants.

Nonetheless, the researcher was obliged to use alternative participants. Out of the initial 55 participants, the researcher managed to collect data from 44 participants, with 11 participants offering various excuses as to why they could not participate in the study. The participants who were interviewed, especially the politicians, were defensive in their responses, or they responded diplomatically. However, the majority of the participants proved productive for the study. Nevertheless, data collection reached saturation, and the researcher was content.

From this research experience, the researcher realised that data gathering in a politically volatile situation demands a clear understanding of the environment in which the fieldwork will be undertaken and adequate preparation for all foreseeable challenges before engaging in any fieldwork. Gaining access in a politically unstable environment requires consent and authority from a wider spectrum of gatekeepers, including political hierarchies, before going out into the field. The researcher has learnt that it is remarkable but true, that the process of entering the field never quite unfolds and ends as the researcher expects it. However, the researcher need not be too self-critical.

3.7 DATA ANALYSIS

Data analysis is a mechanism for reducing and organising data in order to produce findings that require interpretation by the researcher (Burns and Grove, 2003:479). Data analysis is a challenging and creative process characterised by an intimate relationship between the researcher, the participants and the data generated (De Vos, 2002:339). Okello (2004) defines data analysis as a process by which large sets of numbers are reduced to smaller sets in order to make them more understandable. The purpose of data analysis is to provide answers to the research questions being studied.

Interpretation, however, is generally described as the process of finding meaning in the analysed data, or deciding what the intended meaning of something is. Supporting this definition of interpretation, Maree (2007:111) describes interpretation as a process of making sense of the available data, which simply means that the analysed data must be brought into context with the existing theory in order to reveal how it corroborates existing knowledge or brings new understanding to the body of knowledge. However, the data collected from the semi-structured one-on-one interviews, with the use of a voice recorder and transcription was listened to, consolidated and transcribed verbatim for use in the data analysis. The aim of the data analysis was to produce a detailed and systematic recording of issues that were addressed (Burnard, 2003). The data were systematically identified and grouped into themes, according to Tesch's open coding technique (in Creswell, 2009), by following these steps:

- The researcher got a sense of the comprehensive topic by reading all transcripts carefully, while recording all ideas that came to mind.
- The researcher selected one of the shortest, most interesting interview transcripts and went through it while asking: "What is this about?" with the purpose of establishing what the underlying meaning of the information was. Once again, any thoughts that came to mind were noted in the margin of the transcript document.
- After the researcher completed this task for several participants, a list of all the topics was compiled. Similar topics were clustered together and listed in columns in which they were categorised into major topics, unique topics and exceptions.
- The list was compared with the data. The topics were abbreviated as codes and the codes were written next to the appropriate segments of the text. This preliminary

organising scheme was inspected in an attempt to establish whether new categories and codes were emerging.

- The most accurate and suitable descriptions for each theme. Then the total list of categories was achieved by grouping topics that related to each other. Lines were drawn between categories to show interrelationships.

- The final decision, regarding the appropriate abbreviation for each category, was made and the codes were tabulated alphabetically.

- The data related to each category were assembled in one place, and a preliminary analysis was performed.

- The existing data were inspected according to the final themes and sub-themes.

In addition, the study employed content analysis in order to explore documents (text or speech) so as to identify which themes emerge, and to establish what it is that people talk about the most, while also gauging how the themes relate to each other. Thereafter, the researcher will be in a position to interpret the data.

3.8 ETHICAL CONSIDERATIONS

According to Cooper and Schindler (2001:112), as cited in Naicker (2008:48), the goal of ethics in research is to ensure that no one suffers adverse consequences from the research activities. Strydom (2005:57) further defines ethics as a set of moral principles that is suggested by an individual or group, which is subsequently widely accepted, and which offers rules and behavioral expectations about the most correct conduct towards experimental subjects and respondents, employers, sponsors, other researchers, assistants and students.

For research in the social sciences, participants are human beings and the researcher should observe ethical standards throughout the study. Furthermore, Resnik (2011:2) claims that ethical norms have to be adhered to for the following reasons: firstly, norms promote the aims of research, such as knowledge, truth, and avoidance of error; secondly, since research often involves a great deal of cooperation and coordination amongst many different people in

different disciplines and institutions, ethical standards promote values, such as trust, accountability, mutual respect, and fairness, which are essential to collaborative work. According to Polit and Beck (2006) ethical considerations pertinent to the study is based on the three ethical principles of the Belmont Report. These include, informed consent, confidentiality and privacy are discussed below (3.6.1; 3.6.2 and 3.6.2)

The researcher applied to the University of Fort Hare's Ethics Committee for ethical clearance in order to conduct this study. The following forms were completed and sent to the University of Fort Hare's Ethics Committee in order for them to adjudicate on the application: The University Research Ethics Committee Application for Ethical Clearance, which required the protocol synopsis displaying the title of the study; The CV of the Researcher; The University Research Ethics Committee checklist forms signed by the Researcher, the supervisor (Prof Kanyane, MH) and the Head of Department (Prof Ijeoma). The application, with the accompanying documentation, was then submitted for GMRDC approval. This submission also included the University Research Ethics Committee Supervisor Declaration; the Research Ethics Committee Researcher's Declaration; the Conflict of Interest Declaration; as well as the Ethics Research Confidentiality and Informed Consent Forms. After the submission of the abovementioned documents, ethical clearance certificate number KAN011SPIL01, REC-270710-028-RA Level 01 was issued and signed by Professor Wilson Akpan (Acting Dean of Research) on 8th November 2016. This paved the way for the empirical study to be conducted.

3.8.1 Informed consent

According to Kumar (2005:55), informed consent implies that study participants are made adequately aware of the type of information the researcher wants from them, why the information is being sought, what purpose it would be put to, and how the study would affect them (directly or indirectly). In this study, the participants were fully informed about the nature and purpose of the study, and why they have been selected to participate in the study. The issues of confidentiality and voluntary participation pertinent to this study were stressed to the participants.

Dattalo (2010:1) asserts that important ethical issues include voluntary participation and informed consent, anonymity and confidentiality, as well as accountability in terms of the

accuracy of analysis and reporting. Bhattacherjee (2012:137) stressed that subjects in a research project must be made aware that their participation in the study will be completely voluntary, that they have the freedom to withdraw from the study at any time without suffering any unfavorable consequences; furthermore, participants need to be informed that they will not be harmed in any way as a result of their participation or non-participation in the project. The researcher informed all the participants of the purpose of the study, and emphasized that participation in the study would be completely voluntary.

3.8.2 Privacy

The requirement to protect participants' privacy is also an integral component of respect for persons in the ethics application process. Discussion of confidentiality forms part of the informed consent process (Oliver, 2003). Researchers need to demonstrate clearly how confidentiality and anonymity will be maintained throughout the study in light of the specific methodology employed. A researcher who is engaging in focus groups will need to be aware that anonymity is not achievable, as participants will be in the company of fellow participants and may therefore be identifiable. This should be explained to prospective participants. If using a quantitative questionnaire, the researcher needs to make explicit why and how any coding is applied to the tool and the subsequent implications. The duration and methods of data storage and mechanisms for disposal of material should also be clearly outlined within the application.

3.8.3 Confidentiality

Confidentiality is an ethical requirement of most research. Information provided by all study participants, particularly sensitive and personal information, should be protected and not disclosed to anyone other than the researcher (Bless, Higson-Smith and Kagee, 2006). Given the importance of confidentiality in research, the collected data should be protected all the times. Rubin and Babbie (2011:82) confirm that, in survey research, the protection of participants' identities is the greatest concern in regard to the protection of participants' interests and well-being. Fouka and Mantzorou (2011:6) point out that, if not able to promise anonymity, the researcher has to ensure confidentiality, which is the management of private

information by the researcher in order to protect the identity of the subject. Anonymity implies that the researcher or readers of the final research report or paper cannot identify a given response as belonging to a specific respondent (Bhattacherjee, 2012:138). The researcher attached a cover letter to the questionnaire in order to assure the research participants of their anonymity and confidentiality (see Annexure 2).

Babbie (2007:67) emphasises that a research project guarantees confidentiality when the researcher can identify a given person's response, but promise not to do so publicly. In this study, the participants' right to confidentiality was maintained by ensuring that their personal information, such as names and addresses, would not be disclosed to any person or entity. Essentially, the information used from the interviews would not be linked to any individual participant.

3.9 TRUSTWORTHINESS OF THE RESEARCH STUDY

This research study was subjected to Guba's (1981) elements of quality criteria for naturalistic inquiry that are commonly applied in social sciences to assess the trustworthiness and transparency of qualitative research. Noticing that the theoretical and methodological relevance is also important. The elements of quality to policy and practice as a way to demonstrate their applied relevance are related below.

- Dependability

Dependability refers to the consistency and reliability of the research findings and the degree to which research procedures are documented, allowing someone outside the research to follow, audit, and critique the research process (Streubert 2007). The researcher ensured that a detailed coverage of the methodology and methods employed allows the reader to assess the extent to which appropriate research practices have been followed and reflective appraisal of the project (Shenton 2004). Researchers should document research design and implementation, including the methodology and methods, with the details of data collection (e.g., field notes). (Polit et al. 2006, Streubert 2007)

- Credibility

Credibility refers to the degree to which the research represents the actual meanings of the research participants, or the "truth value" (Lincoln and Guba, 1985). When evaluating qualitative research, credibility stems from the intended research purposes, and credible research decisions are those that are consistent with the researchers' purpose (Patton, 2002), requiring researchers and practitioners to think critically and contextually when judging methodological decision making. Credibility were demonstrated through strategies such as data and method triangulation (Padgett, 2008)

- Confirmability

In order to achieve confirmability, researchers must demonstrate that the results are clearly linked to the conclusions in a way that can be followed and, as a process, replicated. Its relevance to application is similar to credibility, where confirmability has particular implications for studies that provide policy recommendations. In qualitative research, the philosophical and epistemological position of the research will be determined by both the problem and the predisposition of the researcher, in terms of their way of categorizing "truth," for example (Moon and Blackman, 2014).

- Transferability

The degree to which the results of qualitative research can be transferred to other contexts or settings with other respondents. The researcher facilitates the transferability judgment by a potential user through thick description (Korstjens & Moser, 2018)

3.10 CONCLUSION

Firstly, this chapter provided a description of the research methodology adopted for this study. The chapter highlighted that the study was based on a qualitative research design, grounded in a descriptive phenomenological approach. Face-to-face engagement was employed in order to acquire information from politicians and deployed politicians serving as administrators and community leaders. The agreed upon appointments for interviews were not honored by the political participants and senior administrators, however, perseverance yielded positive results. Secondly, the data collection procedure was explained in this chapter, with an emphasis on the need for consistency of method, together with a description of the sources of the data collected in this study. Collecting data from politicians and deployed administrators or cadres was a nightmare. In all the WSAs, the agreed upon meeting times were not honored. It was not an easy task for study participants especially politicians and senior managers to respond based on

the questions, as some of the participants were responding diplomatically. In addition, all the politicians were defensive in their responses, although some could be honest. Thirdly, the chapter outlined the sampling procedure, and indicated the sample size. Lastly, the chapter provided a brief description of accessing the study area. Furthermore, consent forms were given to all the study participants and the participants were informed of the confidentiality of their engagement in the study. The ensuing chapter of this study will present the findings of the study, and generate a narrative these findings.

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CHAPTER FOUR

DATA ANALYSIS

4.1 INTRODUCTION

The preceding chapter described and explicated the methodology embraced in this study. The case study design, which encompasses qualitative research techniques, particularly semi-structured in-depth interviews for the collection of data, was used in this study. This chapter sketches how data acquired from the fieldwork was scrutinised and interpreted. The data from the interviews was transcribed and thematically analysed in light of the research questions and objectives outlined in Chapter One of this study.

As discussed in Chapter Three, the data analysis was informed by the qualitative nature of the study. Data was gathered from primary and secondary sources in order to strengthen the argument put forward in the study. The narrative analysis used direct quotations from key participants, written in italics in the discussion below, in order to discuss drawn from the data.

4.2 INSTITUTIONAL AND HUMAN RESOURCE CAPACITY

Local municipalities are tasked with providing "water and sanitation services, limited to potable water supply systems and domestic wastewater and sewage disposal systems" (Smith, 2009:5). Category A and B local municipalities were marked as competent Water Service Providers (WSPs). In terms of the water service function, the interviews conducted with administrators revealed that the district municipalities, in their role as WSAs, were expected to sign a service level agreement with the WSPs, but this has not been done. The district municipality that receives the water and sanitation grant was supposed to comply with this regulation. It was also indicated that district municipalities were still responsible for functioning as both a Water Services Authority (WSA) and a Water Service Provider (WSP). The further study revealed that district municipalities also conducted some operational water upply and maintenance of old water structures and boreholes in the villages, on an ad hoc manner. It was also indicated that there were problems with this arrangement. One of the participants from the administration held similar views, as evident in the statement below:

Shockingly, upon any water and sanitation related challenges, people do not come to us (district municipalities) directly to complain but they approach local municipalities and further protest within their jurisdictions. We are always surviving any form of confrontation with the communities directly and this has created a bad relationship between the local municipalities, the district municipalities and the community.

For that reason, the institutional and human capacity of all local municipalities is always compromised by community protests over the supply of water and sanitation. The protests are always directed at WSPs, and often at WSAs. This view is consistent with the argument posed by Buccus, Hemson, Hicks and Piper (2007:7) who claim that citizens, especially the poor, are far from the centre and are never seen or heard by parliament. Participatory governance is not a natural response on the part of government, as citizens need to resort to extreme measures such as protest or violent means of expression in order to trigger a response. Institutionalised channels are simply not working (Benit-Gbaffou, 2008b:27). Community protests surfaced at Ngwalemong in Sekhukhune, at Sasekani, as well as at the Julesberg, Thoko, Muhlava Cross Villages and Mankweng Township. When the roads are barricaded, local municipalities, as WSPs, are more seriously affected than the district municipality (Tsatsire, 2008:271). Tsatsire (2008:271) emphasises the fact that there was a series of service disruptions throughout the country, primarily in metropolitan municipalities, as a result of ageing infrastructure.

4.2.1 WSA Institutional capacity

In relation to the current water and sanitation services rendered, the interviews conducted with community participants revealed that WSAs are under stress. In this regard, one of the community participants said the following:

In my view, the municipality does not have capacity to supply quality water and sanitations to all citizens. We are drinking dirty water that runs through our taps and we are struggling to control diarrhoea in this area. The water infrastructure and sewerage system has aged. There is only rubbish laying all over the township and nobody cares

The majority of the community participants demonstrated an understanding of the concept of a lack of institutional capacity in the context of access to clean water and decent sanitation. Many communities in the Limpopo province face serious challenges related to access to water and decent sanitation, hence, service delivery protests have mushroomed. This view is consistent with a studies conducted by Thacker (2006) and Ng, Whiz and Lee (1999), in Lourens (2012:12), which indicate that from a service perspective, capacity management is the ability to balance the demand from customers and the capability of the service delivery system to satisfy said demand. Therefore, from a functional perspective, it is apparent that capacity management provides practitioners with guidance on how to plan, justify and manage appropriate levels of resources as required for a given solution. Improper planning for capacity can lead to wasted resources, which results in unnecessary costs, or a lack of resources, which leads to poor performance.

Therefore, radical institutional reforms are required to improve the capacity of the WSAs to effectively deliver basic services, water and sanitation to citizens. To begin with, there must be accountability and credibility on the part of these WSA institutions in order to achieve good governance, which realises citizens' rights to access water and decent sanitation services. To achieve more accountable and credible institutions, formal rules must be changed to address the societal problem of barriers to the supply of clean drinkable water and decent sanitation for all. Interviews with most of the participants from Administration revealed additional shared contests related to the institutional competence in respect of the provision of water and sanitation services. One of the participants alluded to this as follows:

> *Local government is the recipient of substantial investment capital for Infrastructure Development, Operations and Maintenance. The challenge is that funds are not spent properly owing to non-compliance with the Division of Revenue Act (DORA) framework governing financial management and controls. We are unable, at the end of the day, to account for money spent or fail to spend on what it was meant for due to political interference.*

This view is consistent with that of Josie (2008:10), who outlined the challenges arising from fiscal decentralisation (specifically the formula used for MIG allocations), which affected water and sanitation backlogs and the state of water and sanitation infrastructure in the country. On the one hand, some municipalities continue to underspend, as they do not have the capacity to comply with the onerous reporting mechanism and the business planning required in order to access funding. On the other hand, other municipalities overspend but there is no demonstrable evidence regarding the reduction of backlogs (Josie, 2008:10). However, a professional evaluation led by the South African Institute of Civil Engineers revealed the very serious problems now facing South Africa (SAICE, 2011:14). Rated on a scale of "A" to "D", the water infrastructure class received a "D" rating; this indicated that it was in a serious condition and needed urgent attention, although it was deemed sufficient for South Africa's current and immediate future needs.

Similarly, there are indications that some WSAs are effectively able to provide water services to consumers, however, there are major obstacles in this process. One of the participants from Administration confirmed this:

> *The primary obstacle the WSA is faced with is lack of sufficient water from the main source in Limpopo Province and at the same time, the little water that is there is interrupted by illegal connections of water pipes that are mushrooming in informal settlement from the main pipes.*

The earlier extract is consistent with the argument put forward by Watkins (2006:9), that is, that water scarcity is becoming one of the most critical risks threatening social and economic development throughout the world. South Africa is currently classified as a 'water stressed' country. This is largely due to climatic and human settlement patterns. South Africa is characterised by relatively low annual average rainfall combined with high evaporation rates. Grey and Sadoff (2007:547) assert that the scarcity of water is widely perceived as the key feature undermining water security. Water security is understood as "the reliable availability of an acceptable quantity and quality of water for health, livelihoods and production, coupled with an acceptable level of water-related risks" (Sadoff and Muller, 2009). Despite these challenges, institutional capacity is an infinite process because changes in structural conditions

over time require constant modifications to meet ever-emerging challenges. In this respect, the literature agrees that it is neither an output nor project but a continuous process (Alaerts, Hartvelt, Partoni and Balkema, 1996, in Bos, 2006:7; GTZ, 2005, in Bos, 2006:7).

However, the strength of the institution is based on what it needs to fulfil and what it has been mandated to do, as well as what it has planned and promised to do. Water losses and sewage spillages are common complaints in all local municipalities. These concerns emerged during the interviews with political participants. One of the councillor participants held similar views:

> *In my understanding, the municipality is spending more in the maintenance of leaking water pipes and sewage spillages due to infrastructure that is very old or aged. The water and sanitation infrastructure is more than 30 years old and this problem is exacerbated by an increasing population growth and the mushrooming of informal settlements. Community members are occupying vacant land with traditional leaders giving sites to citizens without communicating with the local municipalities for the provision of services.*

This aforesaid resonates with Van der Walt's (2003:57) argument that municipalities in South Africa are facing the dilemma of reduced local funding, increased demand for services and the obligation of additional service-delivery functions not previously associated with municipalities. Local government infrastructure management is, without doubt, more complex than it is at the provincial level (National Treasury, 2006:18). Local government is marked by some dramatic deficiencies in terms of its capacity-related and structural demands of service delivery (Nyalunga, 2006:4). Furthermore, Kroukamp (2005:19) suggests that another challenge relates to the extension of services to areas not previously serviced. Municipalities are also expected to address skewed spatial settlement patterns, which are functionally inefficient and costly, with huge backlogs in service infrastructure in historically underdeveloped areas.

The interviews in WSAs in the more rural areas revealed that exposed pit toilets were located very close to housing (often within 5 metres). One observed that these pit latrines were constructed properly, by government or by consumers. The majority of the community participants are troubled by the state of sanitation. One community participant argued the following:

> *We are still using pit latrines in our community, as there are no alternatives to date to relieve ourselves. We solely depend in underground water. During certain seasons, we happen to find ourselves struggling with diarrhoea in the whole family. We were informed it is caused by these latrines. In addition, there are households in this community that are involuntarily using the open-field to relieve themselves, hence, the majority of the community in the whole village depend on these communal boreholes for water.*

This is congruent with the suggestion put forward by Nhapi (2009) and Manase and Fawcett (2010), both cited in Mukonoweshuro (2014:78), that the chances for contamination of underground water is far higher due to the close proximity of most pit toilets to water sources. This posed a considerable health risk, especially due to the risk of flooding and groundwater pollution of wells, wetlands, springs and rivers. Nhapi (2009) and Manase and Fawcett (2010), in Mukonoweshuro (2014:78), recommend that the facilities must be built a significant distance from any water source, so that contamination could be avoided.

4.2.2 Human resource capacity of WSAs

The administrative office bearers are mandated to drive service delivery. They are seen as role players in and contributors towards the successful implementation of the service delivery projects of local governments, WSAs included. During the interviews, it was revealed that the institutions are struggling to hire and retain skilled personnel. One of councillor participants made the following point on this matter:

> *We are totally not doing well in this area in my view. There is a tremendous shortage of appropriate skilled personnel with technical and administrative*

knowledge which is a major challenge in both management and implementation

of resolutions for water services and sanitation.

This view is consistent with that of Cadogen (2008:38) when he indicated that It is the people (both appointed officials and elected councillors) and their ability to manage the organisational dynamics, the systems and processes at hand as well as social development project management capability that will make the constitutional objectives to be met. Municipalities, as the local sphere of government, should conduct their government business in accordance with constitutional values. These values are critically important to guiding the behaviour of municipal councillors and officials in the execution of their local government duties. These values include transparency, community orientation, accountability, integrity, non-racialism and non-sexism (Maserumule, 2008:442).

Similarly, one of the senior administration outlined the administrative and workforce challenges he encountered as the accounting officer within the local sphere. The participant said:

Eish! The truth is, the municipal officials that I found here lack requisite capacity
to manage water and sanitation services. Their responses to the needs of the
institution and citizens are stagnant, hence they are politically connected. There
are no operations and maintenance plans for the services, so everything is done
on an ad hoc basis, hence unsustainable. There are no funds ring-fenced for
operations and maintenance and officials are resultantly, and of course
inadequately, attending to repairs.

Bos (2006:9) argues that human resource development accomplishes the improvement and maintenance of the quality of personnel resources within an organisation. This includes the way in which people develop and focus their knowledge, skills, attitudes and motivation within their daily routine and their work within the organisation. Therefore, Bos (2006:9) argues that human resource improvement can be divided into four main categories: management;

technical; attitudes and motivation. According to Jackson and Hlahla (1999:10), the challenge facing municipalities is that many new councillors do not understand their roles and have inadvertently demotivated the officials through interference in their professional duties and responsibilities.

The interviews conducted with community participants brought to light serious concerns regarding the capacity of municipal employees to fulfil their service delivery mandate. One of the community participants shared the following:

> *There are troubles with municipal officials. It seems they are unable to operate and maintain anything. The water and sanitation infrastructure is not up to standard because of high water leakages and sewage spillages. It seems there are no maintenance plans that is being implemented. This can be seen on the amount of effluent flowing into local streams and rivers daily.*

This impression is consistent with the argument put forward by Shipalana and Phago (2014:330) who claim that public service institutions are often characterised by an uncontrolled shortage of professional and technical skills, such as administrative management, at all levels. These authors further acknowledge that the public service sector is struggling to attract and retain skilled personnel due to a lack of incentives and poor working conditions. Motshekga (2008:2) concurs with this argument by asserting that many local government structures suffer from a shortage of skills, particularly in financial and administrative areas, which compromise their ability to change their approach to development and to deliver public services effectively and efficiently. This is confirmed by a number of events in South Africa, most notably protest action against the actual or perceived lack of service delivery, which works to put pressure on municipalities to improve service delivery.

The aspect of political and administrative will surfaced during the interviews with community participants who were asked to comment on the provision of water and sanitation to citizens. One of the community participants said the following:

> *Yaah! Mandela must be turning in his grave; everybody is turning a blind eye as all service standard is deteriorating day by day. We failed to maintain or sustain and/or improve what had been acquired from the apartheid government. The state of this town comparatively is getting worse. Water linkage and sewage is all over.*

The Provincial or National Treasury report (2011:14) which indicates that there has been under-investment in the maintenance and refurbishment of infrastructure, which is evident in the number of service delivery failures across the country today, shares these views. Furthermore, the high volume of technical water losses, due to pipe bursts, leakages, and so on, also results in substantial revenue losses for municipalities – revenue that could have been used for further maintenance.

During the interviews with a number of senior administrative office bearers, the lack of oversight on the part of political office bearers also became known. It was also revealed that leadership oversight issues are further crippled by political interference. One of the participants from Administration shared these sentiments:

> *According to my experience, poor or lack of provision of clean water and decent sanitation always breed serious challenges that are affecting the quality of life and has a direct effect to the trust of communities towards municipal services and all system of governance. Cadre deployment exposes the administration to unskilled personnel deployed to lead those with knowledge. It is my observation that these challenges are contributing to the low morale of staff and communities that result into loss of interest to pay for services. The blame is embedded on the oversight role.*

This view is consistent with that of De La Harpe, Risken and Roos (2008:2) who propose that the debate on good governance started in reaction to the inefficient and corrupt administrative structures of developing countries that were eligible for financial loans. This was confirmed by Van Wyk (2004:412) who indicated that the reality in post-1994 South Africa is the demand for new public management, which aims not only to improve administrative output technically,

but also to develop public relations techniques based on communication skills, simplified administrative formalities and procedures, cooperation in public affairs, safeguarding public interest, developing partnership practices, transparency, fighting corruption, promoting a code of ethics and conducting citizen participation in public affairs and consultation. Mashinini (2008:96) writes that economic performance, financial management, democracy, social equity and institutional capacity are the basic indicators of good governance.

According to the interviews conducted with the community participants, there were general expressions of frustration with the general services by the local government, especially with the provision of drinking water and sanitation. One of the community participants said the following:

> *We are generally neglected by the government we elected. We never expected that after more than 20 years we are not counted amongst citizens of this country because we are sharing drinking water with donkeys and other animals from the nearby river. We are struggling with toilet facilities as people use the bush or open fields to relieve themselves. Where is our dignity?*

This view resonates with that of Tsatsire (2008:334) who argues that the recent widespread protests against poor provision of goods and service delivery is an indication that the government's efforts at promoting service delivery have collapsed. Donaldson (2002:21) who indicated that, with the high quality of Performance Management Systems (PMS) and the ability to have a clear understanding of the environment, both internally and externally, the municipality should be in a better position to respond efficiently and effectively in order to address the needs of its constituency supported this.

The aspect of human resources in the local sphere also came under the spotlight from most of the community participants. One of the community participants expressed their frustration as follows:

> *Re bona matata fela! (We only detect problems unfolding). The municipal officials, from labourers to administrative staff, there is no commitment to serve*

the government and to provide services for the community. They are failing the government and the communities. Nothing is improving year in year out and term in and out of councillors. Batho pele, dololo! The government has collapsed.

These views are consistent with the work of Mpehle and Qwabe (2008:258) who agree with the sentiment by stating that, in order for the public sector to achieve its objectives, systems need to be in place, such as a performance audit, to oblige the labour force to prioritise acceptable quality performance. The only concern raised by some of participants is the required institutional capacity to align all available systems with *one* local municipality vision.

The other most common concerns voiced by senior administration was about the service level agreement (SLA) between the Water Services Authorities (WSA) and Water Service Providers (WSP). The guiding principles for the provision of quality service should be stipulated in the SLA between the district municipalities (WSAs) and local municipalities (WSPs). However, the SLA was never there nor had it ever been signed. One of the participants from Administration who held similar views indicated the following:

There is a thin layer separating the WSAs and WSPs (municipalities). Lack of the Service Level Agreement add more confusion. There are no guiding principles that dictates the approach that should be followed by the District municipality and local municipality and other stakeholders. The water grants that are transferred to the district for water and sanitation for a specific local municipality is fully controlled by the district. For a delay or no implementation of the project, the local municipality has limited authority to enquire, hence some water and sanitation projects remain incomplete. This is caused by human element and compromises quality services.

This is in line with the findings of Mufamadi (2008:11) who notes that municipalities continue to face challenges posed by the reality of having a significant number of households that are

without easy access to critical life-sustaining resources. It is the Municipal Systems Act (2000) which "set out the local government obligations to provide basic municipal services. However, the focus is on the basic needs of the community and the promotion of social and economic development of the community" (Tissington, 2011:68). Local government was given the role of Water Services Authorities (WSAs), which oversee water services provision. The WSAs can outsource service delivery to other capable entities, which then become the Water Service Providers (WSPs) (WSP, 2007:38). With the poor or non-existent infrastructure found in at-risk municipalities, the decentralisation of water and sanitation services has had various challenges. Eighty percent of all WSAs can be classified as "very high vulnerability" due to insufficient technical and financial capacity (DWA, 2012:14). "This is of significant concern, and although programmes have been instituted to boost the capacity of WSAs, these have generally taken the form of short-term interventions that did little to transfer skills and build and retain capacity within the WSAs" (DWA, 2012:8).

Consequently, it is human resource capacity that has a greater impact on the institutional capacity of any organisation to attain quality service delivery. A skilled workforce, in administration, finance, technical matters, and so forth, translates into organisational success. Moreover, the operational and maintenance of the provision of water and sanitation will be purposefully and appropriately implemented if the organisational resource capacity of WSAs is enhanced with critical skills.

4.3 LEGAL AND POLICY FRAMEWORKS

The existence of the local government depends on the acceptance of the product they offer consumers. Therefore, the institution is challenged to satisfy those who already have water and sanitation services, those who never had it, those who complain about the high cost of water, and those who argue that they are being neglected. In addition, the community is forcing the WSAs and WSPs to frequently revisit the legislative framework and WSP Agreement in order to undertake sufficient planning to sustain their relationship with their clients.

During the interviews, all the participants indicated the importance of compliance with the provided legal and policy framework for quality service provision. One of the participants from Administration indicated the following:

> *The Republic of South Africa adopted one of the best constitution that is envied by the world. We are only struggling to implement, monitor and evaluate our own legislative frameworks. Therefore, what is to be implemented and adhered to by each sphere of government, politicians, administrators and consumers is specific and doable. Hence, these legal and policy frameworks are purposively being violated.*

This view is consistent with Section 24 of the Constitution of the Republic of South Africa, 1996, which stipulates, "everyone has the right to an environment that is not harmful to their health or well-being". Section 10 of the Constitution affords everyone "inherent dignity and the right to have their dignity respected and protected", while Section 24 lays down the right to a safe and healthy environment, free from pollution and ecological degradation. Section 27(1)(b) entrenches the right of everyone to have access to water; it falls within a cluster of socio-economic rights providing for, among other things, health care services, including reproductive health care (section 27(1)(a)), sufficient food and water (section 27 (1)(b)), and social security and social assistance (section 27(1)(c)).

However, in terms of the phrase "the right of access", a duty is placed on the state to provide the beneficiary with access to said right. The right is not automatically or immediately enforceable. The beneficiary is also obliged to use his or her own resources to fulfil this right, while the state must provide an opportunity for the beneficiary to realise the right. The phrase presents a bridge between the obligations of the state to respect, protect, promote and fulfil and the complementary duty of the beneficiary to be an active participant in the provision, use and protection of the right.   Although, according to Goldin (2005) the right to basic water is not an 'absolute right' it is subject to the state taking reasonable legislative and other measures within its available resources to achieve 'the progressive realisation of these rights (DWAF 2002:33) but according to Ruiters (1996 in Goldin 2005:89) there are expectations of the ANC that it is a caring government and that it should be providing water and services to all. Although water

cannot be provided to everyone immediately, the state has a duty to it citizens, which requires that it, takes all reasonable steps towards the progressive realisation of the rights contained in Chapter 2 of the Constitution. The state must take deliberate, concrete and targeted steps towards meeting its obligations, including:

- enacting legislation and policies with the objective of making water accessible to everyone;
- creating structures to assist people to gain access to water; and
- making water affordable to everyone and ensuring that existing water access is not parried.

4.3.1   Legal obligations

All the participants are aware of the legal obligations of the politicians, administrators and consumers. In this respect, one of the community participants said the following:

> *In my understanding and observations, ward councillors assisted by ward committee members organised and mobilised community members to attend ward committee meetings and imbizos for public participation to report about council activities. This meetings provides opportunities for community members to raise all their service delivery challenges, water and sanitations included.*

This view is consistent with what is stipulated in the SALGA Handbook (2006:51), which confirms that each ward councillor is elected by a specific geographically defined ward within the municipality. The ward councillor, therefore, is expected to make sure that concerns related to his or her ward are represented at the council. The Municipal Structures Act, 1998, provides for the establishment of ward committees to assist the ward councillor in understanding the needs and the views of the community. A ward committee should consist of up to ten members who serve as volunteer advisors to the ward councillor, and who may represent a certain sector. For example, these ward committees may consist of women's groups or ratepayers' associations or individuals from a specific geographic area or community within the ward. Hickey and Mohan (2005:253) emphasise that relocating 'participation' within citizenship situates it in a broader range of socio-political practices, or expressions of agency, through

which people extend their status and rights as members of particular political communities, thereby increasing their control over socioeconomic resources.

The majority of the administration and community participants pointed out the technical inconsistencies of ward committee meetings and community public participation. One of the community participants held the following view:

> *Hmm! According to my experiences with regard to community meetings, ward committee meetings and mass meetings were never called nor held in our ward. Only members of the specific political party converge in such meetings. I don't remember being consulted as a community about any water and sanitation issues. Hence we resort to community protests to be heard by the local council.*

This view is congruent with the argument posed by Kanyane (2009:80) who demonstrates that this compliance-driven approach was experienced during the Integrated Development Planning (IDP) within the frame of local government legislation. In most municipalities, 'community participation' in drafting, implementing and evaluating the IDP process turns out to be an act of paying lip service to legislative requirements. Valeta and Walton (2008), in Kanyane (2009:80), confirm that the general perception is that consultation and participation exist. After all, there are public participation platforms such as the IDP Representative Forum meeting, community IDP hearing, imbizos and ward committees, to name but a few. However, general observations suggest that the consultation process is often followed solely for the sake of compliance rather than for its intended purpose, thus leading to poor planning and weak results.

One of the participants from Administration, who holds similar views to those of the community participant quoted above, made the following statement regarding mass meetings and public participation meetings:

> *The validity and reliability of mass meetings and public participation meetings are reported by politicians or ward councillors. The majority of the reports submitted to the office of the speaker are being doctored to suits their survival.*

The reports are not authentic and always compromises the means for having these mass meetings because nothing proper is being diagnosed.

This view correlates with the work of Moodley and Govender (2006:831) who propose that public consultation can produce better "technical" decisions than a strictly technically oriented decision-making process. Hence, Ward Committees were established as a tool to encourage community participation in local government. Their primary function is to be formal communication channels between councils and communities, and to contribute to decision-making. According to Malefane (2009:469), one of the obstacles of public participation is when municipal officials gather in a boardroom, decide to build a project, put together a document, allocate resources, and then tell people what they have planned. Communities must be engaged from the planning to the implementation; moreover, they should participated in the monitoring and evaluation phases of a particular project, which would ensure the transfer of skills *to* and the ownership of the process *by* the local people. Therefore, the style of planning often brings about service delivery challenges, which could lead to community uprisings against the local leadership.

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There is adequate legislation regulating various aspects of local government in respect of water and sanitation issues. However, political participants raised concerns regarding the harmonisation of national, provincial and local government legislation or policy guidelines on water and sanitation, by indicating that they do not complement each other. One of the senior political participants affirmed this view:

There are lots and lots of policies that were promulgated by the national government that created gaps for administrative operation and accountability on the ground for WSAs and WSPs in relation to water and sanitation infrastructure. The question is, are these policies implementable or implemented to secure access to water and sanitation? If yes, why are we continuously experiencing community riots on basic services? Communities just require services for their survival in that rural area.

Oelofse and Strydom (2010:33) who assert, "Water problems in South Africa are symptomatic of an emerging gap between national policies and the implementation of such policies", support this view. In addition, the role of WSAs (district municipality) and WSPs (local municipality), in relation to their users or customers, is causing a lot of confusion regarding the maintenance and provision of water and sanitation services. For example, when the district municipality as WSA is responsible for installing water pipes in villages and for the management of illegal connections of water pipes, which involves the Lepelle Water Board, the local municipality is more affected than the district.

During the interviews, the majority of the administrative and political participants raised their concerns regarding the fact that local municipalities are declared both WSPs and WSAs; in this regard, the question of regulation arises – who regulates who in this arrangement? There is one manager responsible for the functions of both the WSA and the WSP in the entire local municipality; this means that the regulation function is lacking. Consequently, poor service delivery goes unpunished due to this intergovernmental conundrum. According to Kanyane (2016:96), it has been reported by the minister of Cooperative Governance and Traditional Affairs (CoGTA) that municipalities currently owe water boards an amount of R2 billion; this includes municipalities in all nine provinces. It seems that there are no proper measures in place to ensure that indebted municipalities pay their arrears. An attempt to recover these monies from the defaulting municipalities has been put in place – this involves the DWA, CoGTA, National Treasury, provincial departments of local government, water boards and WSAs. However, this stopgap austerity measure is not sustainable. The arrangement that allows the water boards to bill WSAs or municipalities needs to be reviewed and overhauled, as it is a costly recovery exercise for the defaulting municipalities, which eventually frustrates service delivery at the expense of innocent communities. The same applies to arrangements regarding monies owed by defaulting departments and municipalities to the power utility Eskom. Service delivery decisions, and their implementation, should be made in the best interests and to the advantage of the communities; they should not come as a result of defaulting state departments, SOEs and municipalities working in silos. However, one of the participants from Administration revealed the following:

> *We are not interested in the semantics that water and sanitation is the responsibility of the district municipality, the province or national. What we*

want is for the local municipality to provide the citizens with drinking and cooking water and acceptable decent sanitation.

This view is consistent with that of Folifac (2007:15) who postulates that the "national water policies and national water services are at odds with each other due to lack of political commitment in moving resources in the right direction, giving rise to what is herein referred to as a gap between policies and services". This means that even though policies are in place, implementation lags behind due to insufficient resources and the lack of proper intervention by the relevant spheres of government. The challenge is that governance systems are allocated to municipalities uniformly, without undertaking proper investigations into the issues within the municipality itself; as a result, they do not meet the needs of the people in terms of all the costs associated with service provision.

Adherence to legislative frameworks by an institution contributes to consistency and reduces instances of litigation in order to concentrate on service delivery. Consequently, human dignity will be respected and cherished by expanding access to water and sanitation within moral and ethical imperative. Consequently, dignity, equity, compassion and solidarity are values shared all over the world. Extending water supply and sanitation services to poor households would make a significant contribution to promoting life.

4.3.2 Alternative methods of attaining drinkable water and decent sanitation

In response to alternative means of accessing water, if it is not running through taps, the majority of senior administration and political participants confirmed the municipality's efforts to support the communities with other alternatives. One of the participants from Administration revealed the following:

> *Yes, there are alternatives. The WSA (municipality) uses water tankers that are hired from service providers to supply drinking water to consumers even though the water quality is a nightmare.*

This opinion is consistent with the argument put forward by Singh (2009:15) who pointed out that a mobile community water tanker is a low-pressure communal water delivery system, which consists of a large tanker attached to a vehicle. This tanker is filled with treated water from a water treatment plant; it transports water to target areas, typically those that do not have standpipes or those in which water is not flowing through the pipes. Community members then collect water directly from the tanker via a tap attached to the tanker.

However, some of the community participants argue that water from these communal tankers is also susceptible to contamination during the collection, transportation or storage of the water; they also claim that contamination could result from the poor hygiene within the tanker itself, since the interior is difficult to access and therefore difficult to clean. The community participants residing within the municipalities with ongoing mining activities, and which rely on local mines for water tankers, are frustrated by the quality of water they receive and have nowhere to complain. One of the community participants stated the following:

> *We are always drinking dirty water from water tankers. The condition of this Local Municipality as WSA is devastating. They are without water tankers but rely on the Local Mines that provide with water tankers that supply with drinkable water to the communities despite the fact that its quality is questionable but have no option.*

The majority of the participants from Administration further shared that there are other supplementary views of alternative means of accessing water for the community, that is, from groundwater or boreholes. One of the senior administration said the following:

> *Eish! It is at times very tough and frustrating because the community we are compelled to rely on salty ground water or boreholes because the water tankers are always broken due to mechanical problems and are aged. Hence, the quality of this water is not guaranteed for human consumption.*

This view resonates with the findings of a study, conducted by Anaman (2013:16) that asserts that many concerns have been raised about the sustainability of the groundwater resources of South Africa. First, South Africa has problems with natural recharge, due to the climatic conditions. As a result, there are fluctuations in the groundwater recharge rates. However, there are only a few primary aquifers and the geological formations of South Africa are mostly fractured hard rock with relatively low yields (CSIR, 2010:17).

A number of community participants residing close to mining industries raised their concerns regarding the general quality of the drinking water provided by the municipality. They are worried about the cleanliness of both the surface water and groundwater. One of the community participants raised these concerns as follows:

> *In my view, I am concerned about the quality of this drinking water as our community is surrounded by mining industries. I am informed that mines have an impact on both the groundwater and the scares surface water. While in spillage from the mines into local streams, the local municipality is turning a blind eye on it. Most of us in the community are enduring on purified water that we buy from retailers hence our water bills are high.*

This view is consistent with that of Akabzaa and Darimani (2001), in Yeboah (2008:48), who state that many mines have an active programme to reduce the water table or divert major watercourses away from the mines. This exercise has disruptive outcomes for the quality and availability of surface and groundwater. The concentration of mining operations in Tarkwa has been a chief cause of both surface and groundwater pollution. The following four main problems of water pollution have been identified in Tarkwa mining areas: chemical pollution of groundwater and streams; siltation through increased sediment load; increased faecal matter; and dewatering effects (Akabzaa and Darimani, 2001, in Yeboah, 2008:48-49). In addition, Salvarredy-Aranguren, Probst, Roulet, and Isaure (2008:113) write that dissolved pollutants at a mine site are primarily metals but may include sulphates, nitrates and radionuclide.

During the interviews, one of the political participants, who happened to be a farmer from the rural farm area, raised concerns regarding the groundwater or boreholes that is contaminated by waste or animal remains. This participant argued that a high concentration of E. coli and faecal coliforms in drinking water has a negative effect on human and animal health, and can cause gastrointestinal diseases, which affects dairy farming and subsequently has an effect on human life. The political participant expressed this opinion:

> *In my understanding, the quality of water we are drinking in our area as we depend on water provided from a private farm borehole (groundwater) is affecting us and our livestock. Therefore, all is not right with our health due to continuous diarrhoea and stomachaches, which we are, informed is the symptom of contaminated water.*

Esterhuizen, Fossey and Potgieter (2013:1), who found that, in South Africa, many dairy farms depend on borehole water as the only source of drinking water, support this argument. Generally, dairy farming, in particular, is known to affect groundwater quality through inappropriate dairy waste disposal (Hudak, 2000, in Esterhuizen, 2014:17). During the past two decades, various agricultural activities have been shown to have a negative effect on groundwater in South Africa (Bohlke, 2002, in Esterhuizen, 2014:17). In particular, faecal pathogenic microorganisms and nitrates are responsible for groundwater deterioration (Douagui, Kouame, Koffi, Goula, Dibi, Gone, Coulibaly, Seka, Kouassi, Mangoua and Savane, 2012, in Esterhuizen, 2014:17). Nitrate leaching stems from agricultural sources, such as dairy yards, dairy effluent, waste ponds and fertiliser usage (Huebsch, Horan, Blum, Richards, Grant and Fenton, 2013, in Esterhuizen, 2014:17). Nitrate is regarded as the most widespread contaminant of groundwater, since nitrate is both soluble and mobile; furthermore, it is inclined to leach through soils and infiltrate groundwater (Nolan and Hitt, 2006, in Esterhuizen, 2014:17).

High nitrate levels are prevalent in groundwater throughout South Africa (Maherry, Clarke, Tredoux and Engelbrecht, 2009, in Esterhuizen, 2014:17). Microbial contaminants, such as faecal coliforms adenoviruses, rotaviruses, and enteroviruses, have been identified in groundwater (Jamieson, Gordon, Sharples, Stratton and Madani, 2002; De Oliveira, Fleck,

Comerlato, Kluge, Bergamaschi, Fabres, Da Luz, Dos Santos, Da Silva, Rodrigues, Genro, Staggemeier, Baldasso and Spilki, 2012, in Esterhuizen, 2014:17). The presence of faecal pathogens in groundwater suggests that microorganisms penetrate groundwater and aquifers within days or weeks, which is faster than recharging groundwater (Taylor, Cronin, Pedley, Barker and Atkinson, 2004, in Esterhuizen, 2014:17). The vulnerability of groundwater to microbial contamination is important because of the associated health risks, as the ingestion of low quantities contaminated water could lead to severe health hazards (Usher, Pretorius and Van Tonder, 2007, in Esterhuizen, 2014:17). Pollutants such as nitrates may cause diseases in humans and animals, and have an adverse effect on the environment.

Political and participants from Administration unfolded further challenges related to alternative means of accessing water in their area. Water pipes and community standpipes were installed but no drop of water has ever come out of these taps. One of the political participants expressed their concerns as follows:

> *Yes! When this water project was implemented in 2007 we thought the water crisis in our community will be the things of the past. But, to date as we speak, no water is running through the water taps and no one bothered to come and explain why? Both the district and local municipalities are mum. We are aware that the contractor who was awarded this tender is paid. However, as community we are obliged to continue resorting to unsafe sources such as unprotected wetlands, springs, streams, and rivers. The water pipes are being vandalised, and currently the mainline water pipe traversing through the settlement to town is being vandalised.*

This view is congruent with the findings of Turton (2008), in Wassung (2010:6), that South Africa is a water-scarce country. It receives an annual average of only 497mm of rain, well below the global average of 860mm per year. Moreover, van Vuuren (2009:31) asserts that the declining quality of water, water scarcity and dysfunctional municipal water infrastructure, all of which have resulted in the potential water crisis that has been widely publicised in the media, is a cause for concern. Generally, the South African water sector faces numerous challenges such as increased water deficits, water pollution and decreasing water quality that affect the availability of water and impact negatively on human health (Machete, 2011:4). In addition,

Stone (2009:46) states that the other problem with water shortages is that South African municipalities find it difficult to move water pipes over long distances. Therefore, they find it costly to transport water from the dams or rivers in order to sustain industries and households because reservoirs are not conveniently located; thus, these citizens are involuntarily spending a minimum of R 1.50 to R5.00 in order to get 25 litres of water. The majority of these citizens are not working and those who cannot afford to pay for water resort to water from the wells, springs, fountains and rivers.

One of the community participants warns that the community will run out of drinkable quality water if there is no proper water conservation. One of the community participants poses the following question out of desperation:

> *With the unpredictable rainfall this years, are we not going to experience lack*
> *of water in our areas at one stage? What is government doing?*

Palmer, Graham, Swilling, Robinson, Eales, Fisher-Jeffes, Kasner and Skeen (2016:21) raise the same point, that is, that South Africa is fast running out of cheap options for supplying more water to its citizens. The country has few remaining viable sites for new large dams, and will have to increasingly pursue its re-utilisation programme. Groundwater is currently under-utilised and, although it will become an increasingly important supplementary resource, there is not enough available to make it sufficient to resolve the supply challenges of the big cities, let alone to supply all South African citizens. Palmer, Graham, Swilling, Robinson, Eales, Fisher-Jeffes, Kasner and Skeen (2016:23) also suggest that indirect potable re-use is already standard practice inland. Treated effluent is discharged into river systems where it is diluted and blended before being abstracted and treated to a potable standard downstream. Direct and indirect industrial use of evident in a growing number of places (especially coastal areas) in order to treat municipal water to a level acceptable for industrial re-use, which frees up the available potable water for human consumption. In addition, desalination is being punted widely, be it of mine water and acid mine drainage, municipal return flows or, most costly of all, desalination of sea water as a key supply source for coastal cities.

4.3.3 Revenue enhancement of WSAs

Water users are calling for the appropriate regulation of and transparency in tariff determination processes, so that the sector can have cost-effective tariffs. During the interviews, the majority of the participants stated how important it was for citizens to pay for water and sanitation services. One administration participant hinted that:

In my view, payment of services is an act of citizenry as contained in the Masakhane programme which succeeded the RDP programme and National Development Plan, expressing a need to have basic services paid for. Non-payment of services implies that you ask Peter to pay for Paul and this does not make any sound business idea.

This view correlates with the work Fjeldstad (2004), in Peters (2010:157), who writes that the non-payment of municipal services is not a given for those residing in poor areas, as significant variations in payment and non-payment exist across both poor and non-poor areas. This finding resonates with that of Booysen (2001), in Peters (2010:157) that not only higher-income households, but also households experiencing relatively high levels of poverty, paid for services. Despite the obvious importance of having an indication of willingness to pay, policy-makers continue to make general assumptions about the population to be served and per capita consumption rates (McPhail, 1993, in Peters, 2010:157). The end result is that tariff setting is based on covering operating, maintenance and capital costs, without considering what people are willing to spend, which could be even higher than the set rate. McPhail (1993), in Peters (2010:157), conducted a study of five Moroccan states in a bid to determine whether the price charged for water was correctly set, or whether there was an opportunity to make individual house connections available to some of the indigent households at the retail level. The study found that many low-income households, even those with access to free stand post water services, are willing to pay in excess of 5% of their total household expenditure for individual water services (McPhail, 1993:969). This implies that South Africa needs to re-examine indigent policies that determine which portions of the population cannot afford to pay for services.

The majority of the senior political participants are of the view that both the local government and consumers are to take responsibility for the payment of services. One of the political participants said the following:

Yes, all consumers must be encouraged to pay for municipal services at a cost recovery level while the municipality performs its obligation by supplying citizens with real services that are not interrupted at all times.

This view is consistent with the work of Glaser and Hildreth (1999), in Peters (2010:158), who indicate that citizens' perceptions of government and their willingness to pay are directly linked. In a survey conducted in cities with a population of approximately 300,000 in the mid-west in the United States, they found that half of the participants were willing to pay more for improved local government performance. Fjeldstad (2004), in Peters (2010:158), concurs with the power of citizen perception, which is implicitly linked to the extent of the trust that community members have in local government leadership.

Fjeldstad (2004), in Peters (2010:158), suggests that three dimensions of trust affect citizen compliance. **The first dimension** is trust in local government to act in the interests of their citizens, which refers to whether people believe that the government will spend money on the required services, and whether the services provided are of an acceptable quality. **The second dimension** relates to whether citizens believe that the authorities will establish fair procedures for collecting revenue and distributing services. Effective enforcement to ensure payment is critical, as citizens should believe that non-payment carries a penalty, for example, the cutting off services. However, whereas compliance is expected to be positively related to the severity of the sanctions applied for non-payment, the opposite is true for South Africa (Fjeldstad, 2004, in Peters, 2010:158). The reason for this perverse relationship lies in the principle of reciprocity that is, giving back what you get. In this case, treatment perceived to be unfair or extreme is met with a strong refusal to pay. Finally, **the third dimension** concerns trust in other citizens to pay their share. Here, the belief about the honesty of others comes into play, which is related to the role of social influences. For example, behaviour may change if there is non-payment due to negative social connotations or stigma. The reverse is also true if non-payment is

considered the norm, in which case people may not consider non-compliance to be a big issue (Fjeldstad, 2004, in Peters, 2010:158).

In the majority of the interviews conducted with community participants, the interviewees acknowledged their preparedness to pay for the real services provided. One of the community participants expressed the following:

> *Yes, users have to pay for water and sanitation services. Municipalities should recover costs incurred in rendering services, in order for the services to be sustainable and to enforce maintenance of the infrastructure.*

This view is congruent with a study conducted by Earle, Goldin and Phemo (2005:15), who found that changing the behaviour of people is difficult, but not practically impossible. For example, a community in Klerksdorp that developed a "culture of non-payment" for services during the end years of apartheid, through the rates boycotts, shifted from non-payment levels to the complete payment of services. The elements needed for this dynamic to take place are improved services, customer education and strict enforcement (Earle, Goldin and Phemo, 2005:15). In support of this view, Ruiters (2011, 2013) suggests that the water and sanitation sector is seriously under-financed, revenue management is poor, and there is limited or no investment in maintenance; these factors have led to the deterioration and eventual collapse of infrastructure at the local sphere of government. Effective financial planning and pricing for the water sector requires finding the right mix of revenues from water use charges, tariffs, grants and transfers, that is, 'sustainable cost recovery' (Ruiters, 2011, 2013).

However, the revenue enhancement strategy for WSAs is affected by its failure to collect revenue for water and sanitation from consumers. All the participants, be it at the level of administrators, community members and politicians, concede to this challenge. One community participant said the following:

> *Yes, we are not paying for the services provided by the municipality. We have been advocating in all our imbizos conducted by the mayors for 'flat rate' to be paid in the meantime and that was never implemented. Remember that we were*

taught to boycott paying for services and such a behaviour require a remedial process.

This statement corresponds with the work of Brook and Locussol (2002:37) who argue that cost-recovery is necessary to sustain services on a long-term basis. Arguably, the state will not have the funds to invest in future services, infrastructure upgrades and extensions without cost recovery. Cost recovery is seen as "pro-poor" because it provides the fiscal basis for further service improvements and expansion. Therefore, when a public sector utility does not recover the cost of providing a service, it is often unable to extend the system – this leaves poorer, marginal areas unconnected to the grid, water and sanitation. In agreement, Plummer and Slaymaker (2007:13) declare that good governance requires appropriate human and financial resources for activity related to water supply and access to decent sanitation.

Given the current situation at the WSAs, more attention is required to identify which causes contribute to the problem of non-payment of services, while also addressing consumer concerns and collection issues. The financial status of the WSA remains a serious challenge; on this matter, one of the participants from Administration submitted the following:

The municipality is owing Lepelle Water Board more than R260 million. We are always threatened with water cuts and they reduced water pressure. We are not financially viable as a municipality.

The Auditor General South Africa (Makwetu, 2016:6) expressed the opinion that there was limited WSA improvement in the year under review, which was overshadowed by regressions and stagnant audit outcomes. These regressions were primarily the result of instability in key positions, a lack of capacity, the mismanagement of funds, non-compliance and other financial misconduct at the municipalities. The AGSA announced the following audit outcome for the WSAs in Limpopo (Makwetu, 2016:6):

- Mopani District Municipality WSA was the worst performing district in the province. The district municipality received a disclaimer in the year under review

(2014-15), showing no improvement in the prior year's adverse opinion, while all the local municipalities under its control received qualified audit opinions.

- It is worth mentioning that a total of R77 million was spent on consultants by the Vhembe District Municipality from 2011-12 to 2014-15 with no impact on the audit outcomes. The district municipality received a disclaimer for three consecutive years (2011-12 to 2013-14) and an adverse opinion in 2014-15.

- Capricorn District Municipality showed no movement in its audit outcome. The municipality received a qualified opinion for three consecutive years. Although progress was made in addressing the previous year's audit findings, the progress has not been sufficient to have a positive influence on the audit opinion.

- Polokwane Local Municipality is a WSA in the Capricorn District Municipality. Yet, in spite of changing to an unqualified audit opinion in the year under review, it was the highest contributor to irregular and unauthorised expenditure in the province.

- Bela-Bela Local Municipality WSA experienced significant movement in its audit outcome. The municipality improved from an adverse opinion to a qualified audit opinion. The improvement in the audit outcome was due to the municipality addressing most of the previous year's findings. There was also an overall improvement in the level of commitment and attitude towards improved financial management practices.

- Lephalale Local Municipality WSA showed no movement in its audit outcome. The municipality received a qualified opinion for three consecutive years. It addressed one of the two qualification findings from the previous year.

- Modimolle Local Municipality WSA showed improvement in its audit outcome. The municipality gravitated from a disclaimer opinion to an adverse opinion for the financial period under review. Except for its assets, it was emphasised that limited progress was made in addressing the previous year's audit findings.

- Mogalakwena Local Municipality WSA experienced regression in its audit outcome: the municipality changed from receiving an unqualified to a qualified opinion. Management was not able to address a qualification finding on property, plant and equipment, and a contingent liability.

- Mookgophong Local Municipality WSA showed no improvement in its audit outcome. The municipality received a qualified opinion for three consecutive years.

There was minimal progress in terms of the municipality addressing the previous year's issues. The municipality did not successfully address the qualification on assets, revenue and accounts receivable.

- Thabazimbi Local Municipality WSA experienced no movement in its audit outcome. The municipality received a disclaimer of audit opinion for a second year in a row. Limited progress was made in addressing the previous year's audit findings.

Given the aforementioned audit situation in Limpopo Province, the quality of the financial statements and performance reports submitted for auditing continues to be a challenge for almost all the auditees. The quality of the financial statements submitted for auditing has regressed over the five-year period (2010/15–2014/15), despite spending R122 million on consultants to assist with financial and performance reporting. The amount spent on consultants in the 2014/15 financial year was approximately five times the amount spent in the 2010/11 financial year (Makwetu, 2016:99).

The continued reliance on consultants, with little or no transfer of skills, remains one of the biggest challenges in the province. The province still records unacceptably high levels of irregular expenditure as well as fruitless and wasteful expenditure. This can once again be attributed to internal control systems that do not timeously prevent, detect or address deviations, as well as the lack of consequences for poor performance and transgressions, which was identified in 63% of the auditees (Makwetu, 2016:5-6)

4.4 THE MANDATE AND COMPETENCIES OF WSAs

A WSA is, in the first instance, accountable for the provision of water and sanitation services, the promotion of good health and hygiene awareness through its Environmental Health Practitioners, and monitoring the health of its communities. Furthermore, it is local government that must also take responsibility for driving the process of providing basic household water and sanitation at the local level, for creating an enabling environment through its municipal by-

laws, and for taking responsible decisions on levels of service in order to ensure that they are both appropriate and affordable. Local government is required to develop an Integrated Development Plan, which is aimed at the integrated development and management of its area of jurisdiction. One component of this plan is a Water Service Development Plan that reviews current service levels and backlogs, and sets clear objectives with quantifiable performance indicators. Using these objectives, a domestic sanitation business plan is developed, together with a detailed strategy for the development process. Therefore, local government officials, councillors and communities are legally encouraged to participate in the development of this coherent strategy and to agree on the priorities and approaches thereof (Kasrils, 2003:8-9)

During the interviews, it was evident that all the participants acknowledge the command and accountabilities of local government. One community participant expressed the following:

> *Definitely! We will never stop engaging the Water Services Authority until they do what they are expected to do. They are not doing us any favour in providing water and sanitation.*

Hoffman and Nkadimeng (2016:4) assert that local municipalities in South Africa are tasked with the function of providing water and sanitation in their areas of jurisdiction. Due to the funding and capacity challenges that exist in many rural municipalities, the supply of sufficient and reliable drinking water and decent sanitation remains a challenge. However, the Municipal Systems Act (Act 32 of 2000) centres on the internal systems and administration of a municipality; the Act introduces the differentiation between the function of an authority and that of a provider. It also identifies the importance of alternative mechanisms for providing municipal services and sets out certain requirements for entering into partnerships.

In this regard, the majority of the participants from Administration identified the obligations of the local municipalities to their consumers, therefore, one administration participant stated the following:

Yes, we are trying our best as local municipalities to deliver services to our communities better than the previous government. We are just not doing enough because of the backlogs that was men made and lack of sufficient fund. Our obligation is clear as per the constitution of this country.

This view is in line with the recommendation put forward by Van Zyl, Manus and Pensulo (2008), in Hoffman and Nkadimeng (2016:2), that municipalities as custodians of water sanitation services infrastructure in their respective areas should provide an acceptable standard of services to their communities. This requires rigorous planning for municipal infrastructure, which follows a life cycle management approach. The importance of the role of municipalities is emphasised by Bhagwan, Wegelin, Mckenzie and Wensley (2014), in Hoffman and Nkadimeng (2016:2), who state that the very important service delivery function of local government is to ensure water security and dignified sanitation.

The majority of the political participants from municipalities that are WSPs have complained about the conduct of the WSAs, particularly in regard to the way in which they are handling water and sanitation problems. One of the political participants made the following comment:

Our hands are tied as water service providers. The district municipality is neglecting our people because water and sanitation is their core function. The community just need water and nothing else.

The Department of Water Affairs and Forestry (2003) propounds that the mandate for the provision of water services in the country rests with Water Services Authorities (WSAs) at the local government level, as provided in the Municipal Structures Act, 1998. Thus, according to the Strategic Framework for Water Services, WSAs have to ensure the progressive realisation of the right to water for all people within their area of jurisdiction. In addition, Harshfield, Jemec, Makhado and Ramarumo (2016:2) write that a WSA typically provides taps throughout rural communities. However, Harshfield et al. (2016:2) submit that the distribution of water to

these taps is infrequent, sometimes only occurring once or twice a month, thus failing to provide an adequate supply of potable water.

In some cases, the communal taps that have been installed are not operational due to a lack of maintenance, which forces communities to obtain water from unsafe sources such as rivers and dams. In the 'State of Local Government' report, rural WSAs appear to be hit hard in terms of service provision (Department of Co-operative Governance and Traditional Affairs, 2009).

4.4.1 Responsibility for municipalities as Water Services Authorities

Local municipalities are granted Water Services Authority accreditation status in order to provide clean drinking water and decent sanitation. This responsibility resides with district municipalities and those local municipalities who are permitted to do so by the Minister. The majority of the participants, both political and administration, understand these constitutional obligations. Hence, one of the participants from Administration noted the following:

In my view, this is a constitutional imperative, contained in chapter 7 of the Constitution and scheduled accordingly. Hence, local government is the closest sphere of government to citizens meeting the requirements to deliver services such as water and sanitation.

This opinion is consistent with Koma's (2010:113) assertion that local government is aptly understood as a sphere of government located within communities and well placed to appropriately respond to the local needs, interests and expectations of communities. Van der Waldt (2006), in Koma (2010:113), asserts that local government is at the coalface of public service delivery. This view also articulated by Thornhill (2008:492) who states that local government is often the first point of contact between an individual and a government institution, and it is often argued that local government is the government closest to the people.

Community participants, however, raised conflicting views about the mandate granted to Water Services Authorities, even though some local municipalities are WSAs. One of the community participants made the following statement in this regard:

In my understanding, there is confusion with regard to the Water Services Authority versus water service provider status given to municipalities. Mandates given to municipalities are based on political decisions and therefore differ from region to region. It is therefore difficult to understand why a municipality is given or not given a particular status.

This view is consistent with the status quo of the Limpopo province (DWAF, 2006), as the district local municipalities are WSAs and local municipalities are declared WSPs. However, there are some local municipalities that are declared WSAs by the Minister, such as Polokwane and all local municipalities in the Waterberg District Municipality. This means that not all district municipalities are WSAs and not all local municipalities are WSPs. These arrangements create confusion regarding the approach to the supply of clean water and decent sanitation (DWAF, 2006). This compromise effective service delivery because the sharing of the water services function between Category B and Category C municipalities has made a significant to the difficulties experienced in providing the service; included in these problems is the allocation of resources through the intergovernmental fiscal system. The current practice is that the only recipients of the national grant for water and sanitation are the authorised municipalities. This becomes a problem in instances in which the authorised district municipalities delegate responsibility for service provision to local municipalities, without passing on the necessary funds (LGBER, 2011:129)

A few political participants remain uncertain as to how status is granted to the district municipalities as Water Services Authorities in order to provide clean drinking water and decent sanitation, rather than all local municipalities. It is confusing for some citizens, as evident in the response from one political participant:

In my views, I do not understand why all water and sanitation issues are not handled by the local municipality than being referred to the district municipality. This is done with a view of reducing red tape and bureaucratic processes in dealing with water and sanitation programmes.

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This view resonates with the Water Services Act and prescribes that the legislative duty of municipalities as WSAs is to provide water supply and sanitation according to national norms and standards. However, the then Department of Water Affairs and Forestry (DWAF) reported, in 2007, that many WSAs struggle to fulfil the obligation of basic service delivery due to vast differences in the ability and capacity of weaker municipalities and the predominantly self-sustaining municipalities (RSA, 2009). Since the scale of water service delivery fluctuates across institutions throughout South Africa, where some municipalities are considered to be WSAs and some are not, it is difficult to assess the institutional capacity of local municipalities, in terms of water services, on a national level (Municipal Demarcation Board, 2012). However, this provides evidence of serious misconceptions or misunderstanding related to which institution should be held accountable for ensuring that water and sanitation services are continuously supplied to the citizens.

Water and sanitation services are constitutional rights in the Republic of South Africa. However, factors like global climate change, demographic change, economic growth, the global financial crisis and rising food prices remain a threat to previously disadvantaged communities. Therefore, there is a need to redress this status in terms of access to water, the risks posed by aging and poorly maintained infrastructure, and decreasing water quality demand that water and sanitation services be prioritised by WSAs

4.4.2   Free Basic Water and Sanitation services (FBS)

The right to access to sufficient water is provided in section 27(1) (b) of the South African Constitution. Section 27(1)(b), read in conjunction with section 27 (2), provides that the state must take reasonable legislative and other measures to respect, protect, promote and fulfil the progressive realisation of the right to access to water within its available resources. The provision of clean water in sufficient quantities is important in its own right, as well as in its implications for health, food security and overall economic development.

During the interviews, the participants provided different views regarding he implementability and sustainability of the provision of free basic services. Based on their experiences, the participants revealed similar views on the matter. An administration participant stated the following:

> *Yes, only those who qualify to be in the municipal indigent register, earning less than R3200 per month. What's more, the system is implementable though fraught with challenges of people who are not faithful in their application particularly those who might have improved their economic status but not ready to forfeit the free rations of water and sanitation benefits.*

In a similar vein, Cottle and Deedat (2002:5) posit that local government, with the Department of Water Affairs ensuring that this happens, must implement the Free Basic Water policy. If independent water service providers supply water, they need to be monitored to ensure that they are supplying people with Free Basic Water. Water and sanitation provision should be linked as they impact upon one another. If sanitation provision is lagging, it places surrounding water sources at risk of contamination.

The political participants noted that the free basic water policy is implementable and sustainable, and one political participant stated the following:

> *Yes, it is implementable and sustainable to comply with pro-poor policy position founded on the values of our national democratic system. The indigent policy followed the FBS policy to hasten implementation and this has proved not only successful but humane.*

De Visser, Cottle and Mettler (2003:37) assert that President Thabo Mbeki, in 2000, announced a policy to provide free basic water – providing a bridge between the need for equity and redress and the goal of economic efficiency. A Free Basic Service (FBS) is funded using a combination

of the equitable share of local government revenue and internal cross-subsidies from appropriately structured water tariffs. Nonetheless, it has also specifically been stated that the basic water amount cannot be withheld due to non-payment of past accounts, in accordance with the international Covenant on Economic, Social and Cultural Rights of the United Nations, which specifies that states must provide "sufficient, safe, acceptable, physically accessible and affordable water" to their citizens (Welch, 2005:59). Thus, where water management services are provided with private sector involvement, the government "is in violation of its duty to fulfil its obligation to citizens if it allows private water companies to arbitrarily disconnect water taps or to adopt discriminatory or unaffordable increases in the price of water" (Welch, 2005:61).

There are community participants who acknowledged receiving free basic water services in their communities. However, they have indicated that it is not quantifiable monthly and one community participant made the following statement:

Yes! There are free basic water services provided. However, there are challenges in administering the implementation of the service. It is therefore difficult to account for the exact quantities provided under free basic services.

Moreover, McDonald (2002a:86) writes that the free basic water policy was at the helm of controversy as the promise of 6 kilolitres of water per household per month offers little respite as many low-income households use considerably more than 6 kilolitres due to the relatively high average number of occupants per household. Part of this problem is also the face of the old and leaky apartheid-era infrastructure.

There are also a few community participants who raised dissimilar opinions in relation to access to free basic water and decent sanitation. One of the community participants stated the following:

No, we are not aware if we do receive free basic water and sanitation because the water tankers supply us with water once after two/three weeks. Secondly,

there are no formal toilets at the informal settlements as people use the nearby
bushes to relieve themselves. Therefore, in my understanding there are no free
basic services.

De Visser, Cottle and Mettler (2003:24-43) confirm that the desire for free basic services for all is legislated, but the realisation thereof is challenging. Firstly, there are vast areas where water and sanitation infrastructure does not exist, and in which water and sanitation delivery is required, let alone free water delivery, which is a non-starter. Secondly, the opportunities for cross-subsidisation in rural areas and small rural towns are extremely limited. In an effort to remove the economic inaccessibility of water for all, in 2000. However, the provision of free basic water had met some criticism from researchers such as Pape and McDonald (2002:5) who maintain that the promise of 6 kilolitres of water per household per month also offers little financial respite. Many low-income households use considerably more than 6 kilolitres because of the relatively high average number of occupants per household and also because of the old and leaky Apartheid era infrastructure.

4.4.3 Municipal services users

The majority of the political, administrative and consumer participants endorse that all consumers or users pay for services rendered to them by the municipalities. One political participant said the following:

Yes, it is reasonable for consumers to pay for water and sanitation services
because payments will ensure sustainable provision of the services.

Whittington, Laura and Mux (1991:179) assert that the rationale here is that most people, low-income households included, accept their civic responsibility to pay the full costs of service delivery, and are happy to do so as long as the services are reliable, affordable and of good quality. However, the set of arguments used to justify cost recovery are moral in nature; the first of these revolves around liberal notions of rights and responsibilities. If people have the

'right' to a service like water, then they also have the 'responsibility' to pay for it. According to the Municipal Systems Act (RSA, 2000:s5.2.6), this obligation applies across the board, with residents having a "duty" to pay for all of their municipal services. Furthermore, a related argument is to be found in the burgeoning "willingness to pay" literature. The participants from Administration concur that those who have the means must pay in order to sustain the system. One administration participant expressed the following:

> *Yes, all consumers are expected to pay, here I am referring to all households, private capital in mining, refinery, agriculture, processing and manufacturing and all Provincial and National Departments. The majority of government departments are owing a lot of money to municipalities.*

In this regard, Peters (2013:163) writes that there are symptoms that the culture of non-payment of services by government departments to municipalities has grown rapidly. Moreover, the devolution of assets and payment of property rates from the national Department of Public Works to its provincial counterparts, created many bottlenecks in payments to municipalities. However, according to McDonald (2002b:4), cost recovery has not always been the modus operandi of the South African government; during apartheid, many South Africans received subsidised services and infrastructure, even though these benefited rich white suburbanites the most. McDonald (2002b:4) writes that there were user fees, tariffs and general property rates for services, but most of these charges had little relevance to the actual marginal costs of providing them, which was due partly to the fact that it was virtually impossible to estimate the costs of a given municipal service because apartheid local governments were so fragmented but, more importantly, there was little interest on the part of the apartheid state to pursue full cost recovery.

During the interviews with community participants, the majority of the interviewees expressed their willingness to pay for the services provided to them, and one community participant said the following:

> *Yes, we do want to pay for the services but the majority of us are unemployed. There is no one working in my house and we are surviving through child grant.*

This township is full of household that are owing the municipality more than the cost of their houses.

Gurria (2009:54) argues that, to the contrary, there is widespread refusal on the part of public enterprises and institutions to pay their water and sanitation bills. Politicians and other people of influence often avoid paying their utility bills. In some countries, bribery exacted by meter readers diverts the revenue into private pockets, leaving the utility fiscus short. As a result, the collection of user charges from households and other consumer groups is often as low as 60-70% of the billed amounts. In South Africa, the Constitution allows national government to decentralise its power and attendant responsibilities; in this way, local government can assume responsibility for the provision of water services and can contract private companies to manage and provide water services. However, the national government "bears the ultimate responsibility to ensure compliance with the state's obligations", as contained in the Bill of Rights (Welch, 2005:60). The Constitution recognises international law in the interpretation of the Bill of Rights. South Africa is party to the International Covenant on Economic, Social and Cultural Rights of the United Nations, which specifies that states must provide "sufficient, safe, acceptable, physically accessible and affordable water" to their citizens (Welch, 2005:59). Thus, where water management services are provided with private sector involvement, the government "is in violation of its duty to fulfil its obligation to citizens if it allows private water companies to arbitrarily disconnect water taps or to adopt discriminatory or unaffordable increases in the price of water" (Welch, 2005:61).

4.4.4 Surfeits of water and sanitation

There are households that are exposed to open defecation because there are no proper latrines or no sewage system. The majority of the community participants declared that they have observeding households that are struggling in access water and sanitation. One community participant expressed the following:

Yes, there are households without sanitation (toilets) in our municipality, particularly in rural areas, in farms and informal settlements they do not have access to adequate sanitation at all.

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Tissington (2011), in Schroeder (2015:13), writes that households without access to basic sanitation services continue to use the bucket system, pit toilets, or the open veld. In 2001, the South African government adopted a policy for the provision of free basic services. As part of its initiative to implement a free basic water supply and sanitation policy, the DWAF initially established a process to roll out the policy to municipalities, which, as local authorities, were and still are, primarily responsible for implementing it (Mjoli and Bhagwan, 2010) in Schroeder (2015:24). The White Paper on Basic Household Sanitation (DWAF, 2001), in Schroeder (2015:24), emphasised the provision of what it described as a 'basic level of household sanitation' to those areas in greatest need, namely, rural areas and urban informal settlements. Key to the White Paper was that the provision of sanitation services should be 'demand driven' and ostensibly 'community based', with a focus on community participation, which implies a some sense of local ownership, and on household choice (DWAF, 2001, in Schroeder, 2015:24-25). However, the permutations of such ownership have been poorly conceptualised (Schroeder, 2015:25).

Many of the participants revealed that there is no WSA that enjoys a surplus provision of water and sanitation. In maintaining this view, one community participant stated the following:

> *Yoh! Life is tough here ntate! We are obliged to rely on the veld to relieve ourselves since we are deserted by the government. Only those who are staying in town and township are better off. The rural areas and informal settlement have no water storage and proper sanitation system at all. We also depend on rainy water from the nearby stream and dams unless the water tankers managed to supply water then. We sometimes have to buy water from those with boreholes or those fetching it from town.*

This view is consistent with that of Devine and Kullmann (2012:73), who argue that diarrheal diseases are attributed to unsafe water supply and inadequate sanitation and hygiene. Furthermore, millions of people die every year from these diseases, the vast majority of whom are children under five years of age (Devine and Kullman, 2012:73). Consequently, inadequate sanitation leads to environmental degradation and dispersed pollution of water sources. Poor sanitation has a significant impact on health, thus affecting the quality of life, education and

development (WHO, 2004:23). However, Section 3(1) of the Water Services Act of 1997 (No. 108 of 1997) states that "everyone has a right of access to basic water supply and basic sanitation". According to De Visser, Cottle and Mettler (2003:34), "basic water supply" is the "prescribed minimum standard of water supply services necessary for the reliable supply of a sufficient quantity and quality of water to households, including informal households, to support life and personal hygiene". The 1997 Act sets out the rights and duties of consumers and places emphasis on ensuring the financial viability of water service providers. The concept of "cost recovery" (of providing water) and private sector involvement in the provision of water is entrenched in the constitution of South Africa (WSA, 1997:Ch3, Section 9).

The interviews with the majority of the administration and political participants gave voice to allegations of the failure to supply quality drinkable water and decent sanitation to the citizens. One administration participant made the following comment:

> *If free basic services is really provided to different communities, access to minimal water supply and sanitation would be things of the past. When normal provision of such services are rolling then surpluses of basic services would be realised.*
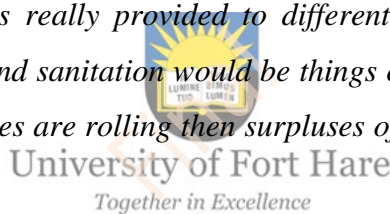
This view is consistent with the argument posed by Tissington (2011), in Ambole (2016:36), who identified that one of the major challenges, at the local government level, which impedes the delivery of water and sanitation services was the failure of many municipalities to implement Free Basic Water and Sanitation policies, and to ensure access to basic services for poor households. Hence, the issue of access to decent sanitation was also affected by the urban sprawls of informal settlements, due to rural-urban migration as well as population growth and the influx of foreign nationals. One political participant offered the following response that echoed these concerns:

> *The WSA has failed to sustain the provision of basic services due to misjudging the population growth. There has been a tremendous mushrooming of new settlement and informal settlements, while we never built new water infrastructures to meet the demands.*

Local governments are still struggling to fulfil their mandate of service provision to previously marginalized and disadvantaged people, specifically in townships and rural areas in the country. Since the country has been experiencing several violent service delivery protests in different localities, there is on-going debate as to the effectiveness of local service provision. In its working paper, The Department of Cooperative Governance and Traditional Affairs (COGTA, 2009) identified service delivery backlogs as one of the key challenges facing South African developmental local governments. According to Kanyane (2006), in Asha (2014:224), the major explanation provided for the failure of local service delivery is the lack of capacity, poor community participation (Barichievy, Piper and Parker, 2005; Asha, 2014:224), and the devolution of limited power and authority (Santon, 2009 in Asha, 2014:224). In practice, local authorities are struggling to meet the needs of the poor for basic services. Koelble and Siddle (2013), in Asha (2014:224), noted that municipal governance in South Africa is in a state of paralysis, service delivery failure, and dysfunction.

Conversely, there are several reasons for the failure of water services authorities to deliver water services. The provision of water services requires money; while municipalities can rely on a combination of subsidies from national government and transfers from other municipal accounts for part of this financing, the rest of the financing is expected to come from local tariffs. In certain areas, however, municipalities have faced shortfalls in collecting tariffs. Clearly, the meaning and interpretation of "reasonableness" is relative here. It is questionable whether the failure of a local authority to give access to water services, as a result of inefficient administration or the inadequate allocation of funds, is reasonable. A water services authority may, however, impose reasonable limitations on the use of water services in order to regulate beneficial use, the abuse of the service and pollution. However, unless municipalities have the financial and technical assistance and qualified human resources to comply with national water policy, and standards, their ability to deliver is severely compromised; this gives rise to the inequitable delivery of services, depending on the resources of the municipality and its geographic location (Human Rights Research, 2009:15).

As a result of the lack of capacity and skills within municipalities, water supply in most rural communities is of a major concern. In some areas, more than two weeks would pass without

communities receiving running water. This problem is caused by a number of factors that include the unavailability of the operators and municipal officials responsible for operational maintenance, which results in the poor operation and maintenance of infrastructure. In almost all the project sites visited, there was some infrastructure in place, which ranged from reservoirs, borehole pumps, reticulation pipes, street taps and others. However, most of the infrastructure in the selected project sites was poorly maintained (Mothetha, Nkuna and Mema, 2015:4). One of the challenges identified as affecting the supply of water in rural areas is illegal connections. Illegal connections affect the pressure of water in the pipelines, either to or from the reservoir, as some piped water gets lost along the way, which forbids the reservoir to get full (Mothetha, Nkuna and Mema, 2015:5). Furthermore, political interference in municipal operations pertaining to the development of infrastructure is a further operational issue that affects water sector infrastructure; such interference results in the funds allocated to water infrastructure development not being appropriately spent (DBSA, 2012, in Mothetha, Nkuna and Mema, 2015:6).

4.5 INSTITUTIONAL CAPACITY CONSTRAINTS AND CHALLENGES OF WSAs

Based on the Local Government: Municipal Structures Act 117 of 1998, municipality capacity includes the administration, financial management, and infrastructure that enables a municipality to collect revenue and to govern, on its own initiative, the local government affairs of its community. Koma (2010:112-113) emphasises that a strong state capacity is critically important as a distinguishing feature of a developmental state. This is achieved through the creation of an inexpensive, efficient and effective public service, staffed by the nation's brightest and best officials functioning without constraints, and capable of being innovative in addressing the social and economic needs of the citizens (Evans 1998; Palidano, 2000, in Koma, 2010:113).

Therefore, it is against this backdrop that the inefficiency and ineffectiveness in local government institutions breeds institutional capacity constraints and challenges. Hence, one community participant said the following:

Yes, cadre deployment is rendering this local municipality dysfunctional and not responsive to the needs of the people. Until the right things are done of considering qualified persons for positions, institutional challenges will remain and the delivery of quality services to consumers compromised.

This view is consistent with the argument put forward by Kemoni and Ngulube (2008), in Kanyane (2009:85), that in order to be an effective instrument of development, the public service needs to be guided by the principles and values of accountability, honesty, impartiality, service quality and professionalism. Therefore, the achievement of clean and strong governance structures requires legitimisation and the rule of law, public accountability, openness, information and transparency, citizen participation as well as checks and balances (Kemoni and Ngulube, 2008, in Kanyane, 2009:85). However, water services provision to black communities was inferior to that enjoyed by white communities (MacKay, 2003:65) although, according to Cameron (2003), in Carmichael and Midwinter (2003:116), the access and delivery of water to white communities, even white local authorities, was considered inefficient.

White local authorities kept separate native revenue accounts for black townships that were under their control, and the townships and rural areas were left to fend for themselves (DWAF, 1995, in Goldin, 2004:138). Most municipalities and townships did, however, offer some level of basic services to their residents. Water was typically provided through a standpipe in a community. Those houses which had in-yard or in-house connections usually paid a flat monthly rate for the service they received. As the political situation of the country continued to be destabilised, the black majority adopted a process of "civil disobedience"; this involved withholding payment for municipal services such as water and electricity and was collectively referred to as a "culture of non-payment". The government turned a blind eye to the lack of payment and generally carried on providing the basic services in an effort to prevent political tensions from escalating further (McDonald, 2002a:3). Local authorities under black control were meant to raise their revenues and provide services, however, they became a point of contention between various civil and political groups.

4.5.1   WSA Strategic imperative

The majority of the participants from political and administration are of the view that most rural areas access water and sanitation as expected, through communal water standpipes or water tankers. One senior political participant expressed the following:

Yes, the municipality is doing the best it could to supply water as expected. We cannot deny the fact that there are challenges in other areas at times. However, job depth, design and organisational development are essential ingredient for institutional development and require a careful study to determine their levels.

Kieck and Wagner (2008), in Koma (2010:114), postulate that the local municipality is expected to review and decide on an appropriate mechanism for the provision of water services and decent sanitation in its area of jurisdiction. Hence, according to Koma (2010:114), pit latrines are most common in Limpopo (64.5%) and least common in the Western Cape (0.8%). Limpopo recorded the lowest percentages of access to piped water within 200m of a household, as it was well below the national average norm of 74,4%. Therefore, the institutional strategic imperatives for consumers to acquire quality services is critical.

The majority of the community participants from rural areas and townships are of the opinion that the municipalities are not doing enough to provide basic services; they feel that citizens are not supplied with quality water and decent sanitation to restore their human dignity and quality of life. One community participant said the following:

The ad hoc nature of interventions imply the municipality is not doing enough to ensure sustainable service delivery. Water pipes and meters are installed in our villages however, the taps never tasted water running through them. Community members are fetching water from the river and wells.

This view is in congruence with that of Roux (2005:69) and the Constitution of the Republic of South Africa, in that the local sphere of government, being the government closest to the

people, is given the core function of rendering a variety of basic and essential services to the community within its jurisdiction. The country may have made progress towards water accessibility since 1994, but the challenge remains massive. Communities are increasingly upset about a lack of service delivery, and only 10% of municipalities have successfully performed in line with the Regulatory Performance Management system requirements since this was established. Some areas display a 40% average in relation to reliable water supply, which is unacceptable; municipalities, municipal managers and implementation managers must be held accountable for these failures and under-achievements. A formal top-to-bottom and bottom-to-top system is required to engender a culture of accountability. Municipalities and municipal managers should be assessed using a top-to-bottom approach, while communities need open and workable channels through which to lodge complaints. Formal communication channels through which to escalate matters due to government non-responsiveness are imperative (WID, 2015:3). One community participant made the following statement:

> *We are always receiving high water bills from the local government, yet two to three weeks passes without seeing a drop of water from the taps or of services. One is surprised with the model of strategic approach applied by this institutions for us to access water and sanitation.*

Kanyane (2006:116) writes that weak leadership in strategic management, including corporate governance; the shortage of skills to implement financial management; legislation; the misplacement of skills within municipalities, political considerations in the appointment of senior managers without required qualifications, tremendously weakened the performance of municipalities. Koma (2010:116) concurs that effective and strategic leadership is needed to take bold and decisive action against poor performance and the lack of accountability. Maserumule (2008:441) emphasises that the political and administrative components of the municipality should have the skills, competences and knowledge that befit the imperatives of a developmental system of local government. Thus, skills and knowledge acquisition should be at the top of the agenda of these municipalities in an attempt to achieve their municipal strategic vision and objectives.

4.5.2 Accessing adequate clean drinking water and decent sanitation

In response to questions on these matters, the interviewees expressed quite a number of frustrations directed regarding access to water and sanitation within different communities. Based on the interviews conducted with participants from Administration, accessing adequate water is still characterised by poor service delivery. One administration participant expressed the following:

> *Yes, while the State has generally committed significant resources towards access to adequate water and sanitation services, the majority of villages are not enjoying these benefits. Different Regional Bulk Water Infrastructure Projects remains monuments but with little impacts. Sanitation backlogs have been reduced significantly although challenges remain at the level of intermediary provision.*

This view is consistent with Reid and Vogel (2006:17) who asserting that access to water is imperative to a successful development strategy, because access to clean water is one of the most significant resources for reducing poverty and disease, improving the life of the poor through rural development, and increasing food security. In addition, Mutamba (2014), in Hoffman and Nkadimeng (2014:3), suggests that water demand management and water conservation may offer many benefits in the effort towards alleviating South Africa's current water supply problems. These benefits may include more efficient water infrastructure, cost savings, consistency of water supply, improved water quality and increased income for water service providers. Bhagwan, Wegelin, Mckenzie and Wensley (2014), in Hoffman and Nkadimeng (2014:3), also support the potential of water demand management and link this to a recent study on the current status of water supply in South Africa conducted by the Water Research Commission.

During the interviews on local municipalities, with community participants who are living in farm municipalities, the interviewees noted some of the serious problems they experience in accessing water and sanitation. One of the community participants indicated the following:

> *Majority of us who are living in farms and most informal settlements are the forgotten majority and these are vulnerable people who depend on the goodwill of farm owners for services subjected and we are often being subjected to abuses.*

Del Grande (2009:64) writes that farm dwellers in South Africa get water from a variety of sources. Natural sources are the main source of water in farms; these include springs, streams and rivers. Some farmers supplement weak springs with water from dams. Landowners have assisted in installing piped water and tanks. However, few have clean potable water sources. Those that do have clean potable water have usually obtained this through a co-operative relationship with the landowner or a councillor. One community participant said that:

Yes! The community frustration generated a behavioural pattern that is destructive to service delivery facilities. The challenge at community level relates to vandalism, illegal connections, theft and poor cost recovery.

Muller (2008:48) states that the issue of vandalism of water service infrastructure, such as taps and the theft of valves and diesel pump machines for boreholes, was identified as one of the constraints experienced by the municipality. One of the causes of the vandalism of water projects is a lack of proper community consultation and involvement prior to the implementation of the water project. The projects were imposed on the people of these communities and were not community-driven. Furthermore, the illegal connection of water pipes that lead to the reservoir disrupted the provision of bulk water to these communities. The Municipality Water Service Plan of 2008 indicates that the rate of illegal connection reached an unacceptable point. It is imperative for the communities to take ownership of all projects and to protect what belongs to them; this will however only be possible when thorough constructive community engagement and public participation is done in line with the basic values and principles of public administration.

4.5.3   Water resources

One of the most common municipal service delivery challenges is the lack of water resources. Most rural municipalities were established and located in water-stressed areas during the apartheid era; thus, the provision of free basic water to these areas remains a challenge. The majority of participants from Administration from rural municipalities pointed out that they

rely on water tankers for water usage. One of the participants from Administration said the following:

> *In order to address the challenge of water scarcity in communities, we sometimes have to rely on water tankers, where we contract water tankers to deliver water to communities, sometimes once or twice a week. However, the challenge with this arrangement is that it's too costly and sometimes may not be possible.*

This view is in agreement with that of Elhiriaka (2007:123) who asserts that the lack of water resources is often overlooked. Consequently, the cost of drawing water from sources that are almost 50km away are often not included in the grants provided. In addition, the lack of surface water in these areas exacerbates the challenge of accessing water. Boyce (2010:17) argues that the reduction in rainfall eventually reduces the amount of recharge to groundwater, hence, the volume of water capacity has dropped. Moriarty and Butterworth (2004), in Smits and Butterworth (2005:12), review issues pertaining to water resources management, in water and sanitation service delivery, with a focus on the south. In essence, water and sanitation services interact with water resources management at two points: inlets and outlets. While the principles of Integrated Water Resource Management (IWRM) can be of great use in ensuring good practice within a domestic water supply system (for example, when applied to decentralised management), IWRM is most obvious at those points where water for domestic use (and sewage disposal) directly interacts with other uses and the environment.

The classic domestic water cycle has the following stages: abstraction, water treatment, supply to households and, where waterborne sewerage exists, removal from the household through sewers, wastewater treatment and discharge to a water body. In this cycle, the most critical elements from the IWRM viewpoint are the abstraction from the source (quantity, quality and reliability issues), and discharge into watercourses (quantity and quality issues) or, indeed, leakage to groundwater. Despite these linkages, the planning of water services is often done without considering their implications on water resources. For example, Pollard and du Toit (2005), in Smits and Butterworth (2005:12), argue that in South Africa the local government has had a very narrow focus of responsibility within water resources management; that is, they

have focussed solely on water supply, which is not planned within the water resources management framework of the catchment.

During the interviews, it became apparent that water treatment for both surface and underground water should be prioritised. One of the political participants from the rural municipalities expressed the following in this regard:

> *In my view, as government we should put more emphasis on water treatments in all our dams and boreholes. Water is a rare commodity and important to sustain life at all levels.*

Dayem and Odeh (2010:174) emphasise that the "treatment of water as a free good, and bureaucratic allocation and management is inconsistent with the requirements and challenges of the new 'era' of water scarcity". According to Seetharam (2007), in Nkuna (2012:15-16), it is therefore important that the new forms of governance create institutions that can adequately address the "new realities of water resource scarcity". South Africa is often lauded for having a very progressive Constitution and Water Acts. However, this framework alone cannot guarantee the sustainable and equitable use of the country's most precious resource. Rapid urbanisation, expansion of the mining industry, the increasing use of chemicals in agriculture, and the destruction of our natural/green infrastructure has undermined the quality of the country's water resources. Poor water quality has a negative impact on human health, threatens downstream irrigation areas and food security, increases industrial costs and raw water treatment costs arising from removing pollutants, reduces income generated from recreation and ecotourism, destroys ecosystems and affects biodiversity. The deterioration of water quality is therefore an issue that can affect many national priorities and strategies, including strategies for economic development, health management and biodiversity conservation (DWS, 2016: ix).

In response to these issues, the community participants voiced numerous complaints regarding water shortages and sanitation. One community participant said the following:

As community leaders, we are receiving lots of complaints on water shortage regularly and lack of sanitation. These queries and concerns are forwarded to ward councillor and his hands are also tight. With all the efforts claimed to be done or in place to serve water, the source of water for our community is a contest, as people sometimes have to travel a long distance to fetch water.

Congruently, Mirumachi and Van Wyk (2010), in Phiri (2011:11), argue that the effective and sustainable management of water resources is vital for ensuring sustainable development, and they put forward that an integrated approach is said to be the most remarkable of all the approaches available for managing this vital resource for consumers. In addition, Warner (2006), in Butcher (2007:10), writes that within the framework of sustainable management of water resources, Integrated Water Resource Management (IWRM) is regarded as an appropriate approach to addressing threats posed to water resources, as it takes into account a broad spectrum of social, economic and ecological factors, as well as their links. The IWRM process depends on collaboration and partnerships at all levels, based on a political commitment to and wider societal awareness of the need for water security and the sustainable management of water resources (Jonch-Clausen and Fugl, 2001:502).

One of the community participants stated the following:

We are always fetching water 9km from the dam from where we are staying. Sometime we buy water from those with boreholes or those who are using their cars to fetch water.

Miranda, Hordijk, Rommy and Torres (2011:12) posit that when the provision of services fails to reach the poor, it provides an opportunity for private vendors to step in by selling drinking water to the poor at prices that are possibly 10 times higher than what richer households pay; this exacerbates the poverty in rural communities. However, according to Xie (2006:7), it is important to recognise that access to clean and sufficient water and sanitation, at an affordable

price, is a human right. As such, the scarcity of water resources cannot be taken for granted, but should be progressively realised as a human rights issue.

The participants from political and administration recognised the water shortage as problematic; one of the participants from Administration made the following statement regarding the issue:

> *In my understanding, water shortage is a global crisis orchestrated by the climate change and draught. South Africa is the thirstiest driest country in the world. We receive less than 450mm of rain annually, and this translate into supply constraints. This situation is compounded by 60% of water allocated to agriculture and majority of it is unused. We need progressive enforcement of the water principles underpinned by the National Water Act to engender the philosophy of the revised National Water Resource Strategy.*

On this matter, Nnadozie (2011:339) asserts that, in terms of South African law, basic water supply must be sufficient, safe, accessible and affordable. It must also be provided continuously and must be of the stipulated minimum rate of flow and quality. These communities still do not enjoy these rights, and the local sphere of government, which is in close proximity to these communities, is unable to turn the situation around. Regrettably, the municipalities cannot be held accountable for this situation. Consequently, people in these communities are vulnerable to water-borne diseases. This implies that local and national policies and strategies aimed at ensuring the basic service requirements and rights of poor communities dismally failed to fulfil their obligations.

Therefore, water is a public good and has a social and economic value in all its competing uses. In the past, the economic value of water resources was not adequately recognised, which resulted in inefficient water use. As IWRM emphasises, for economic and financial sustainability, water resources should be managed as an economic good so as to achieve efficient and equitable use, while at the same time conserving and protecting water resources (Xie, 2006:6). Furthermore, the management of water resources as an economic good, through water pricing, makes a significant contribution towards achieving the financial sustainability

of water service provision, which ensures full cost recovery. The economic value of water is generally more appreciated in water scarce countries than it is in water abundant countries, because the need to manage this scarce resource is more urgent. Therefore, there is a social and economic slant in water scarce countries, which is not evident in water abundant countries.

4.5.4 Public participation

All the interviewees indicated that the relevant stakeholders are not doing enough to constructively engage with each. One administration participant stated the following:

> *Yes, lack of engagement with the community resulted in community anger. And*
> *at the same time, some of the protests are politically motivated and manifest*
> *under the guide of service delivery concerned groups.*

Furthermore, Friedman (2006:4) asserts that public participation is best understood in light of participatory governance, which suggests that "….the task of running public affairs is not solely entrusted to government and the public administration, but involves co-operation between state institutions and civil society groups." In addition, section 17(2) of Chapter 4 of the Municipal Systems Act states that "a municipality must establish appropriate mechanisms, processes and procedures to enable the local community to participate in the [local] affairs." The Act further calls for municipalities to develop a culture of municipal governance that works hand in hand with elected representatives within a system of participatory governance.

The majority of the political participants revealed the impact of a divided community based on alignment divisions within the ANC. During municipal consultative processes pertaining to service delivery, unity has been compromised. In this regard, one political participant voiced the following concerns:

> *The leaders of most of our community protests are spearheaded by members of*
> *the governing party who are disgruntled from their official meetings, although*
> *the majority of water and sanitation related issues are genuine and practical.*
> *Municipal ward meetings are held without the knowledge of certain section of*

the community. When the mayor's imbizos are held, stern confrontations float up always with the purpose of the meeting being compromised. These prompted the community to lose interest resulting in only members of the ANC attending the public participation.

Parnell, Pieterse, Swilling and Woodridge (2002:27) suggest that development does not occur successfully if beneficiaries are not part of the planning and implementation of the process as this raises the question as to whether public participation is the solution for social and economic development.

One of the community participants further voiced the following:

I don't think the current protests are caused by lack of public participation only. Consultation do take place with the few community members, but when project prioritisation is done some of the projects are twisted and implemented without the acquaintance of the community which sparks confrontation. This is triggered by the community awareness and interest about their rights on the provision of services by the municipality.

Similarly, alliances are a virtual necessity in today's complex environment, be it in government or private sector. Uncertainty in the operating environment is perhaps the most compelling reason for the establishment of alliances in order to achieve stability, predictability and dependability in such relations (Williams, 2005, in Nleya, 2005:13). Whatever the motivation for entering into a collaborative arrangement in the first place, such alliances seldom last long (Williams, 2005; Fadeeva, 2004, in Nleya, 2005:13).

The majority of the participants from Administration also raised concerns regarding the contemporary approach applied when consulting members of the public. One administration participant revealed the following:

To a certain degree, yes, these protests are generally due to non-participation of communities in the affairs of the municipalities. They become spectators on everything that involves the municipal activities and further opt to be negative while some of the protests can be apportioned to heated political activities [display of political powers] towards local government elections because the general observation is that after the elections the protests do subside.

Mc Lennan and Munslow (2009:42) write that democratic popularity will not secure delivery; they impress upon the reader that only stable, able leadership with moral purpose will achieve this. Local municipalities should increasingly build trust by engaging honestly and provide the information that citizens need to make decisions and access resources. This will require strong, ethical and capable institutional leadership with a moral mission that can move beyond policy and planning to action-oriented implementation. Community members are aware of the community's needs and priorities; therefore, the only way to understand them is to engage with community members constructively and in an organised manner. One of the political participants expressed these concerns as follows:

It is the community that determines the type of service required to be delivered in their areas. There is nothing for them without them being part of the solution. We should encourage our community members to attend the public participation and not only ward committee members.

Poignantly, Tsatsire (2008:321) underscores that, as a matter of fact, communities know their own needs much better than public officials do. Public participation is a vital prerequisite for the successful functioning of local government (Maphazi, 2012:11). In addition, Alexander (2010), in Nleya (2011:3), argues that the protest wave in poor areas, which generally started in 2004, was attributed to failures in service delivery. The exact configuration of grievances varied from protest to protest and from community to community. Invariably, issues linked to deficits in service delivery featured prominently in these protests (Booysen, 2007, in Nleya, 2011:3). Other grievances included dissatisfaction with local councils and administrations who were accused of being unresponsive to the needs of citizens; furthermore, councillors were

accused of corruption and nepotism, amongst other things (Atkinson, 2007; Booysen, 2007; Alexander, 2010, in Nleya 2011:3).

4.5.5 Consumer payments of water and sanitation services

During the interviews, it emerged from the majority of the participants that there are classifications of consumers, that is, those in town and township, who are expected to pay for water and sanitation. One community participant said the following:

> *There is a need for a better system employed that will ensure that all consumers*
> *or users, urban or rural residents pay for water and sanitation services. It should*
> *be a model that is affordable and without creating an administrative burden to*
> *municipalities rather than dividing the community based on their environment.*

Peters (2012:158) suggests that both the willingness and unwillingness to pay could stem from dissatisfaction with services delivered by the government. As a result, municipal authorities are unable to leverage financial and other resources in order to adequately improve service delivery neither are they able to resolve certain efficiency aspects that should improve the affordability of services. In South Africa, the culture of non-payment of services refers to people having the same mind-set as they did during the apartheid epoch of rates boycotts, that is, when ratepayers refused to pay in protest against the discriminatory policies of the government of the day. The rationale behind this is that people became accustomed to not paying under the apartheid government, and have not changed despite the transition to democracy.

The majority of participants from Administration revealed that there is a trend, amongst community members, towards hiding behind poverty. Almost everyone desires to be classified as indigent because they are just not ready to pay for the services rendered to them. One of the participants from Administration made the following claim:

> *It is unfair for citizens who are able or capable to pay and they do not pay. For*
> *the mere fact that the cost of living is too high and that they are subjected to*

poverty is not on. This trend will collapse the local municipalities to provide
services.

This view resonates with that of Booysen (2001), Botes and Pelser (2001) and Burger (2001), all cited in Peters (2012:157), who believe that poverty accounts for the inability to pay municipal services. Peters (2012:157) writes that the 'inability to pay' suggests that there is an income level herein which people are unable to pay for the delivery of services. This raises the perennial question of affordability. Therefore, Milne (2004), in Peters (2012:157), suggests using "core affordability indicators", which, if properly monitored, can give policy-makers early indications of changes in the affordability of services.

However, some participants from Administration are also of the view that paying for water and sanitation in rural areas is not appropriate. One administrative participant stated the following:

The economic status of most people living in urban and township areas differs
greatly to those in the rural areas. The settlement patterns in the rural areas also
makes it difficult to re-design settlement to allow water and sanitation system
reticulations. These makes the provision of such basic services a nightmare and
is characterised by disruption and unsustainability.

Rost, Ratfielde and Topbaev (2015), in Netshipale (2015:11), argue that the price of water and sanitation affects both the distribution of water and sanitation amongst the various sectors and the quantity of water usage. Unequivocally, water and sanitation are services that need special attention at the local sphere of government in order to redress the imbalances of the past. Mathekga and Buccus (2009:13) emphasise that the local government system in South Africa was conceptually crafted not only to play a developmental role, but also to respond to the citizenry, especially on matters related to basic services. Local government has a democratic mandate to provide a democratic and accountable government for communities excluded from the political sphere during the apartheid era (Mathekga and Buccus, 2009:13).

4.5.6   Consumer contentment

In responding to the satisfaction of users with the provision of water and sanitation by the municipality, there are participants from Administration who are satisfied while there are those who are not. One of the participants from Administration noted the following:

Yes, the current provision level of water and sanitation is satisfactory but not sustainable. The concerns are mainly of operations and maintenance of the infrastructure.

The Department of Water Affairs (DWA, 2010:32) states that access to basic water supply drastically improved from 1994 to 2010. However, water service providers still need to supply water to the remaining areas, as expected. This indicates that the South African government is committed to fulfilling its Constitutional mandate of giving everyone access to clean water and decent sanitation. This achievement, made possible by the government, proves that it is working hard to provide basic services to all people, particularly to the poor in this country. However, the maintenance and operation of water-supply systems in rural villages varies between the geographical locations and socioeconomic conditions as core-operation and maintenance problems for drinking water (Department of Water Affairs and Forestry, 2006:17).

In contrary, the majority of the community participants showed that the provision of water and sanitation to the citizens in their communities is not convincing. One community participant voiced this concern as follows:

No. the provision of water and sanitation is not satisfactory. There are areas that do not receive water and sanitation services at all. On Areas that receive water there are regular interruptions. Above it all, the community is not informed by this regular breakdown of water supply.

Likewise, Thomson and Nleya (2008:115) write that access to water and sanitation may have improved over the post-apartheid years, however, this improvement is insufficient to raise the quality of life for poorer communities. In many informal settlements it is difficult to lay sanitation infrastructure closer to the shacks because of shack density.

The interviews with the majority of the political participants revealed that coordination and cooperation between the WSAs and WSPs is inadequate. One political participant noted the following:

> *The local citizens are not happy with the current scale of providing water and sanitation. Every village is going on rampage against us yet it is the core function of the district.*

Furthermore, Smith (2009:19) indicates that South Africa is said to have one of the highest number of service delivery protests in the world, estimated at 10 000 in 2007. One of the driving forces behind escalating protests across the country is the increasing level of public frustration at the disconnection between the state and its citizenry when it comes to service delivery. This is partially attributable to local government becoming increasingly technocratic in its approach to service delivery.
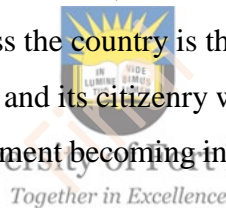
4.5.7 Households technical hitches

The majority of the community participants expressed that there are households that are struggling to access water and sanitation. One of the community participants even said the following:

> *Yes, most of the rural households experiences serious challenges in accessing the services of clean, drinkable water and decent sanitation. The rights of these households are being violated.*

Gleick (2000), in Earle, Goldin and Kgomotso (2005:13-14), writes that the access to water is a fundamental human right implicitly supported by international law, declaration of the provision of quality services, and state practice. This right could also be considered more basic and vital than some of the more explicit human rights already acknowledged by the international community. De Visser, Cottle and Mettler (2003:32) also argue that the right is not automatically or immediately enforceable, and that each beneficiary is also under an obligation to use his or her own resources to fulfil this right. Although, according to Goldin (2005), in Earle, Goldin and Kgomotso (2005:14), the right to basic water is not an 'absolute right', it is subject to the state taking reasonable legislative and other measures within its available resources to achieve 'the progressive realisation of these rights (DWAF, 2002:33).

In addition, one of the political participants voice similar views, as follows:

> *Yes! It is mostly the households in rural areas who have glitches in accessing clean water and decent sanitation. The households in urban areas and or townships are compromised by the aged infrastructure or the infrastructure maintenance that continuously cause water outages and sewer blockages that is all over.*
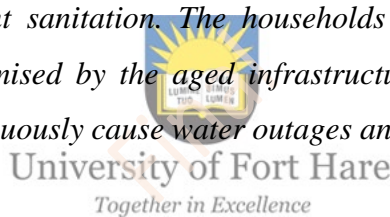
Koelble and Siddle (2013), in Asha (2014:225), confirm that municipal governance in South Africa is in a state of paralysis, service delivery failure, and dysfunctionality. Koma (2010:114) asserts that it is important to state that these backlogs do not take into account population growth, new households and the limited infrastructure facilities in numerous municipalities. The enormity of service delivery challenges saddling municipalities remains daunting. Further, the performance of municipalities should be located within the context of the unique challenges faced by weaker and more vulnerable municipalities that are characterised by complex rural development problems, including massive infrastructure backlogs that require extraordinary measures in order to address their funding and delivery capacity requirements.

The input provided by the administrative interviewees centred on the socio-economic status of households in most of the communities in their municipalities. One administration participant noted the following:

It is a worrying factor that there is a high population growth in our communities. Hence, the rate of unemployment is high. Most households are surviving on social grants. But the same families are not registered as indigent. This has an impact on the equitable share or fiscal allocations by the national government, which add more frustrations on service delivery.

4.6 POSSIBLE EFFECTIVE STRATEGIES AND INTERVENTIONS

At present, it is evident that WSAs require a strong, coherent and transformative political and administrative leadership to steer the implementation process in the right direction in order to achieve the organisational objectives. This initiative should be supported and co-ordinated by a committed, skilled administration that supports the rendering of quality services, and whose actions do not have contradictory results for service delivery. Maserumule (2008:441) posits that the political and administrative components of the municipality should have skills, competences and knowledge that befit the imperatives of a developmental system of local government.

4.6.1 Inaugurated strategies

During the interviews, many participants from political and administration revealed that there are significant plans in place to ensure that all citizens receive clean water and decent sanitation. One of the political participants said the following:

Yes, the district municipalities or WSAs have a master plan in place for water and sanitation services as guided by the adopted IDPs and ward priority needs. But it is not implemented.

This view concurs with the strategic framework for water services, which was adopted in 2003 as a national umbrella framework for the water service sector, and which was developed in consultation with the South African Local Government Association (SALGA) and other key stakeholders. The strategic framework acknowledges that "Water is Life, Sanitation is Dignity" (RSA, 2013:8; South African Human Research Council, 2014:28). The 2003 strategic framework reaffirms the national government's constitutional responsibility to provide regulatory support for local government, to ensure effective performance of its available water supply and sanitation duties through the development of legislation governing the provision of water and sanitation services (RSA, 2013:8).

The participants from Administration with similar views revealed their frustration with institutions that are accountable for the provision of water and sanitation. One of the participants from Administration indicated the following:

> *Of course, although the strategies are available on paper, the role of the district and local municipalities especially where the districts is a WSAs create deeper confusions and frustrations for local citizens when this basic services are not supplied.*
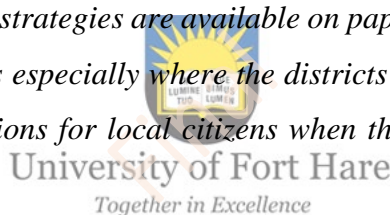
This opinion is supported in the Local Government Budgets and Expenditure Review (2011:129), which indicates that the sharing of the water services function between Category B and Category C municipalities contributed to some of the difficulties currently experienced in providing the service, including problems in the allocation of resources through the intergovernmental fiscal system. The current practice is that the only recipients of the national grant for water and sanitation are the authorised municipalities. This becomes a problem in instances in which authorised district municipalities delegate responsibility for service provision to local municipalities without passing on the necessary funds.

In addition, one of the participants from Administration further indicated the disharmony between the WSAs and WSPs, as follows:

In my views, there is no harmonious relationship of service delivery between the Water Services Authorities and the Water Service Providers. This renders a serious problem for the consumers.

Smith (2009:19) argues that the decentralisation of the authority function to the municipal level, where the capacity to adequately perform WSA functions does not exist, which means that this local regulation role could be rescaled to the district municipal level and the other way round. This initiative could force a greater separation of WSA and WSP functions than is currently possible. It would also avoid the continued conflict of interest inherent in most municipalities performing both WSA and WSP roles.

The majority of the community participants confirmed that there are no new initiatives in place to provide water and sanitation services to local citizens, and one community participant stated the following:

No, there is nothing distinctive that has transformed from the manner in which water and sanitation services reached the communities. The boreholes that we continuously used in the past is broken due to lack of maintenance. We are then forced to rely on water from the local river. The water tankers rented by the municipality is untrustworthy for water hence it also supply dirty water. In the new settlements, people have no toilets as they are using the bush/veld to relieve themselves.

This view is consistent with Smith's (2009:19) argument that one of the driving forces behind escalating protests across the country is the rise in public frustration at the disconnection between the state and the citizenry on all matters related to service delivery. This is partially attributable to local government becoming increasingly technocratic in its approach to service delivery.

4.6.2 Fiscal approach

In response to questions related to this topic, the majority of the political and participants from Administration revealed that there is an inadequate budget for these endeavors, and that no funding and financial mechanism projects exist to improve access to water and sanitation. One of the political participants indicated the following:

> *No, there is no adequate functional muscles to deal with water and sanitation backlogs and programmes. Due to pressure that is piling for the demand of services, there is a trend by municipalities to want to do more or everything at the same time with little resources available. Rather embark on being realistic, communicate honestly with the citizens perform as per adopted schedules with regular feedbacks given.*

Khatri and Vairavamoorthy (2007), in Mothetha, Nkuna and Mema (2013:6), assert that poorly maintained water supply systems can generally be traced to insufficient financial resources and poor management. The deterioration in water infrastructure threatened the quality and reliability of all water and sanitation services. However, insufficient funding for water and sanitation to poor and rural citizens poses a serious challenge for local municipalities.

In this regard, one administration participant said the following:

> *The Municipal Infrastructure Grant and Municipal System Improvement Grants allocated for the municipality are insufficient to deal with water and sanitation backlogs. As such projects are implemented in phases or multi-year projects. The community require water and sanitation now. Hence, the state of corruption is destroying the desire to uplift quality of life for citizens.*

The challenges confronting WSAs are the fact that municipal infrastructure grants and equitable share funding allocations are insufficient. This problem means that municipalities are unable to eradicate backlogs, as expected of them. The fact that local governments have to

operate under financial constraints means that the services provided to communities come at the expense of other services that are valued by these communities (Bardhan and Mookherjee, 2006:124). Ruiters and Matji (2015:662) also argue that the water and sanitation sector is seriously under-financed, revenue management is poor, and there is limited or no investment in maintenance. These have led to the deterioration and the eventual collapse of infrastructure in various municipalities.

Moreover, there are community participants who argue that here is enough funding for water and sanitation in South Africa. One of the community participants indicated the following:

> *Yes, there is enough budget for water and sanitation services through the MIG and MISG from the National Department of Water and Sanitation. Due to administrative challenges or failures, municipalities are unable to spend such moneys appropriately on the projects meant for water and sanitation.*

In the case of the FMG and MSIG, the impact of improved financial and performance management is not always evident in the audit outcomes of the municipalities. In 2014-15, the number of MIG-funded projects audited, and which focused on water and sanitation projects, increased. It was detected that the target of 52% of the projects audited were either not achieved or the municipalities had not assessed their performance against these targets (Makwetu, 2016:8).

4.6.3 Monitoring and evaluation system

In response to the aspects of monitoring and evaluation, the majority of the interviewees did not mince their words in pointing out that there is no system of this nature employed by WSAs. Should it be there, then it is not effective or it is not implemented. One administration participant said the following:

> *No, there is no monitoring and evaluation systems in place meant for water and sanitation. There is no attempt by the WSAs to keep proper records on the*

efficiency, effectiveness, sustainability and relevance of services rendered and therefore it would be difficult to monitor where there are no service standards in place. Without proper records, clear performance targets and baseline information, it would be difficult to conduct evaluations on services rendered.

Furthermore, Mjoli (2010:vi) writes that the monitoring and evaluation of progress in the implementation of the sanitation policy and its impact on the lives of poor households was limited to the counting of toilets and the number of jobs created. There was no monitoring of behavioural change and evaluation of the impact of improved sanitation infrastructure on the quality of life and health of the beneficiary communities. Oranje and Berrisford (2012:3) and Oranje (2014:8) support this view in that the lack of concern with plan implementation and the disregard for specifications around short-term targets and longer-term goals and objectives in such plans do not only challenge the authority of the State, but question the validity of the plan and planning in general, as life continues without adherence to the plan, and makes a mockery of planning, planners and plans. Furthermore, even though communities and stakeholders are invited to become involved and are often engaged in the preparation and review of plans, the participation processes take on a 'compliance-form' rather than a conscious co-preparation, co-ownership and co-responsibility nature.

Moreover, one of the political participants said the following:

Yes, the monitoring and evaluation is in place because the municipality has an adopted IDP, which is supplemented by the Municipal Service Delivery and Budget Implementation Plan. The two systems feeds into the municipal performance system (Performance Management System) that contains service delivery targets set for a particular financial cycle.

In this regard, Kanyane (2009:80) writes that the IDP programmes are considered a compliance-driven process that is required by local government legislation because, in most municipalities, 'community participation' means drafting, implementing and evaluating the IDP process, which often only pays lip service to legislative requirements. Valeta and Walton (2008:376) also maintain that the consultation process is often followed for the sake of

compliance rather than for its intended purpose, hence, it produces poor planning and results. Therefore, it is a planning framework that must be followed by all municipalities in their preparation of their five year strategic plans (Achmat, 2002:3) and, according to Harrison (2008:321), it provides a mechanism to "align budgeting and project implementation with strategic priorities, and to link across and coordinate the growing number of sectorial plans, programmes and projects that impact on the activities of municipal government". A perspective provided by Hauge (2001:7) is that the real product of a monitoring and evaluation system is not necessarily only the reports or facts, but a higher quality of decision-making. Critically, the monitoring and evaluation system needs to provide a continuous flow of actionable information about the interrelationship between operational activities, especially those of government, and the reality of poverty on the ground. The monitoring and evaluation system should provide a means for managers to know which programmes have any discernible impact on poverty.

4.7 CONCLUSION

This chapter focussed on the presentation, analysis and interpretation of the data collected through individual face-to-face interviews, and supported by the literature. Therefore, based on the responses received from the study participants during the interviews and the subsequent data analysis and interpretations, there is a clear indication of a lack of inclusive and sustainable provision of water and sanitation services by WSAs. The inability to provide a regular water supply or the slow pace of service delivery in the provision of drinkable water and decent sanitation to citizens is a violation of their constitutional rights. Furthermore, the ineffective intergovernmental fiscal administration on water and sanitation, the questionable capacity to deliver services, funding constraints and a cumbersome legislative environment, create an avenue for many communities to resort to violent service delivery protests.

It is also evident that the majority of the service delivery protests emanated from the inability of WSAs to fulfil their mandate to the citizens. Complaints such as corruption, lack of skilled personnel, lack of institutional capacity and poor co-ordination by WSAs and WSPs were also mentioned in the context of their negative impact on the equitable distribution of water and sanitation to communities; therefore, these matters cannot be deflected as non-issues.

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CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The previous chapter dealt with the findings of the field work that sought to investigate the capacity of the Limpopo Water Services Authorities to provide access to clean drinking water and decent sanitation. The analysis highlighted the state of access to clean drinkable water and decent sanitation from the perspective of the municipality and the community.

The study tackled the objectives set out in Chapter One and therefore examined the capacity and capability of the Limpopo Water Services Authorities (WSA) to deliver access to clean freshwater and decent hygiene, which was found to be problematic. *Arguably, the provision of water and sanitation services collapsed during the Jacob Zuma administration. Poor administrative principles and delivery of quality water and sanitation, unattended aging infrastructure, the lack of skilled personnel, erroneous deployment of friends to senior technical and financial positions, as well as the high rate of white-collar corruption accounted for this; hence, the number of service delivery protests in the Limpopo province escalated.*

5.2 CONCLUDING ISSUES

Chapter One introduced and described, in detail, the background to the study. The ultimate objective of an introduction and background to a study is to enlighten the bibliophile as to the value of the study and to make available the milieu in which the study has been carried out. The chapter highlighted the importance and relevance of this study, and justified undertaking such a study. The statement of the problem, the research objectives, significance of the study, delimitations, and ethical considerations were placed into context in this chapter. These informs the systematic projection of the study problem and the necessity the study project. *However,*

inabilities and lack of quality management by the WSAs to provide water and decent sanitation to communities placed the citizens at high risks. Failure to access drinkable water and decent sanitation is hazardous and unacceptable as this is a human right, which has been excessively violated. Previously disadvantaged rural communities and those living in informal settlements are forced, by circumstance, to make use of exposed founts of water drawn from dug wells by hand, and rivers that are vulnerable to human consumption. As water is life and sanitation is dignity, the lack of access to water and decent sanitation compromises the rights of citizens. Therefore, there are institutions that have been created to fulfil the mandate of providing water and sanitation; however, these institutions have failed the society.

This study is conceptually and theoretically contextualised in **Chapter Two**. Calpin's Theory of True Access, within the context of sustainable development, underpins the study. Ensuring access to water and sanitation as human rights constitutes an important step towards making it a reality for everyone. This means that access to safe water and basic sanitation is a legal entitlement, rather than a commodity or service provided on a charitable basis. The achievement of basic and improved levels of access should be accelerated. The "least served" should be better targeted and therefore inequalities decreased; communities and vulnerable groups should be empowered to take part in decision-making processes. The means and mechanisms available in the United Nations human rights system should be used to monitor the progress of nations in realising the right to water and sanitation, and to hold governments accountable. Lessons were drawn from water and sanitation management in different countries in order to inform the institutional framework in South Africa. In addition, the chapter successfully reviewed the relevant literature on the examination of the capacity of Limpopo WSAs to provide access to clean drinking water and decent sanitation. The literature review played a significant role in the compilation of the most relevant and current sources on the provision of drinkable water and decent sanitation to communities. It has further provided greater impetus to the findings of the study.
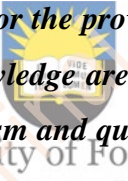
However, the theoretical exposition lacks robust articulation of the rurally based communities. The theorisation is biased on service delivery in urban and peri-urban

communities and this study added more nuance to understanding the dynamics of service delivery in rural areas and informal settlements. The majority of the rural areas and informal settlements struggle with access to water and sanitation. The Limpopo province is dominated by local municipalities that have declined in their provision of service delivery in respect of water and sanitation; therefore, water and sanitation grants have been provided to all WSAs in order that they are able to provide such a service. *All WSAs owe exorbitant amounts of money, in the range of millions, to the Water Boards. The Water Board's threats to limit the provision of bulk water have since surfaced; citizens who are paying on a regular basis are compromised in the process, which does not make any administrative sense at all. Hence, it is a recipe for violent protest.*

Chapter Three outlined the research methods and approaches that were employed in this study. This chapter provided detail on the research methodology engaged during the process of the investigation. The selected methodological approach was preferred in order to guide the processes embarked upon so as to achieve the pronounced objectives of the study, which sought to investigate the research problem regarding the provision of water and sanitation to communities in the Limpopo province. *Therefore, the study was rooted in a qualitative research design, grounded on the descriptive approach. Interviews were employed to acquire information from politicians, administrators and community members. Obtaining data from a highly sensitive and politicised environment was frustrating. Scheduled meetings were not always honoured, and the researcher had to reschedule numerous appointments. Some of the politicians would even attempt to withhold information in order to defend their institutions and political careers. These arrogant attitudes were displayed even after the researcher provided clarity on the consent forms and the interviews*.

Chapter Four presented data analysis and the findings of the study, in full detail. In this regard, the collected data was analysed by means of Tesch's open coding technique, which was specifically linked to the research method selected for this study. The collected data was classified according to themes and sub-themes; these themes and sub-themes were used to interpret and discuss the qualitative data in order to arrive at the findings of the study. The chapter successfully addressed the objectives and research questions outlined in Chapter One.

Based on the responses received from the participants during the face-to-face interviews, and the subsequent data analyses and interpretations, the incompetence of the WSAs in delivering the required services in a sustainable manner was identified. It is apparent that maintaining the institution at its current status is not sustainable. ***The incapability of regular supply or a slow pace of service delivery in the provision of drinkable water and decent sanitation to citizens is a violation of people's human rights. The majority of service delivery protests existed due to a lack of water and sanitation provision. The participants noted that the high level of corruption deprives them of good quality services. Due to the unavailability of skilled personnel in WSAs and WSPs, institutional capacity was dismally in disarray. More importantly, it surfaced that the financial mismanagement in all municipalities is unacceptable, especially unauthorised, irregular and fruitless expenditure. Year in and year out, the Auditor General raised similar challenges regarding financial management; surprisingly, both the political and administrative office bearers showed no interest in addressing these challenges of maladministration. In addition, there is continuous disharmony between administration and political office bearers. These led to the poor coordination between WSAs and WSPs for the provision of drinkable water and sanitation services. Hence, employees with no knowledge are deployed in local municipalities due to their political connections. Professionalism and quality performance remain at a low, with no improvement of service provision.***

In the current chapter, Chapter Five, the implications of the study, based on the findings presented in Chapter Four, are highlighted hereto:

5.2.1 Examination of the capacity and capability of Limpopo Water Services Authorities to delivering access to clean freshwater and decent hygiene

The study findings revealed improved access to water and sanitation resources. Despite the fact that improvements have allegedly been comprehended in the provision of water and sanitation services, the study also revealed serious challenges in accessing both clean drinking water and decent sanitation. In addition, there is significant backlog in the communities without access to clean drinking water and decent sanitation. What became evident has been the mushrooming of service delivery protests throughout the Limpopo province. The protesters all gave voice to

their frustrations regarding the unavailability of such services within previously disadvantaged communities. There are historically un-serviced areas wherein communities rely on water from rivers, and they thus share water with animals. This has significant implications on the lives of the community, who are inevitably vulnerable to health hazards. *Community members submitted numerous petitions demanding the provision of water and sanitation. However, after political office bearers accepted the memos, responses to submitted memorandums are usually not given. These display arrogancy and lack of accountability by public office bearers. These attitudes violates the basic aspects of BathoPele principles. . Therefore, the interests of the users have been undermined. This attitude displays the spirit of arrogance the abuse of public office affected the three spheres of governments.*

There is a shortage of bulk water and sanitation infrastructure, especially in rural areas. Most communities with water and sanitation service backlogs are still confined to utilising communal taps and unimproved pit latrines or VIP sanitation, whereas most communities in informal settlements opt to use open fields. Where improvement was evident, greater focus was directed to the new infrastructure to extend services to areas that were disadvantaged. At the same time, the maintenance of aging infrastructure was neglected. The majority of WSAs experienced more water loss that was unaccounted for due to pipe leakages. Furthermore, there are more sewage spillages, in most townships, caused by aging infrastructure. These multiple challenges place the WSAs under pressure to provide quality services. The communities that were accessing water during the apartheid system are today struggling to access water over a period of a few months; the implication of this is that the services they were receiving have been cut off in one way or another. It was detected that these interruptions are caused by illegal connections on the main water pipe line**. *Regrettably, the communities that were previously able to access water, even during apartheid, are today struggling to access water. The implications of this are complex. Surprisingly, the water interruptions were caused by illegal connections on the main water pipe line. Due to the lack of a monitoring and evaluation mechanism, corrupt officials took advantage of the porous situation to fulfil their selfish interests.***

The study findings revealed a shortage of skilled personnel to operate, manage and maintain the water and sanitation infrastructure which, postures a challenge to the provision of water and sanitation services. The insufficient number of people employed to maintain the water and sanitation infrastructure results in a slow pace in fixing burst or broken taps and blocked sanitation facilities. Blocked and damaged sewerage pipes overflow into the streets, posing health risks to people and contaminating potable water in streams. Due to the shortage of employees with the requisite technical skills, communal taps leak for weeks with the possibility of being permanently closed rather than fixed. Water leaks sometimes result in households having no access to clean drinking water. *Therefore, the shortage of skilled personnel means that the WSAs have no technical expertise, no operational scope, no maintenance, no proper management, and no governance. In other words, officials are working on what they cannot adequately perform or they are 'solving' problems without the requisite knowledge to do so. Therefore, in order to correct this situation, it is imperative that the sector appoints skilled personnel, who are guided by professionalism. Performance targets must be clear so as to monitor and evaluate accountability.*

5.2.2 Assessment of the legislative frameworks and other policies linked to the implementation of water and sanitation in the district municipalities of Limpopo

The study findings revealed that there are numerous or sufficient legislative frameworks to regulate water and sanitation service delivery to citizens. There are those frameworks promulgated for the National Department of Water and Sanitations, the Provincial Department of Water and Sanitation, Water Services Authorities or Municipalities with numerous by-laws. There are further legislative frameworks that regulate bulk water supply institutions, water boards as well as water service providers. The findings also identified frameworks that overlap the water service institutions, which creates confusion amongst the communities. For example, the roles of Water Services Authorities and that of Water Service Providers appear to be confusing consumers. The district municipalities are declared Water Services Authorities while local municipalities are Water Service Providers. When consumers protest, it is the local municipalities that are experiencing road blockages and the burning of tires. *Therefore, the drawbacks of the current institutional arrangements arise from the overlapping mandates of*

the DWA, COGTA, WSAs (District Municipalities), Local Municipalities and the Department of Human Settlements.

The study conducted by Kanyane (2016), entitled "Interplay of intergovernmental relations conundrum, in State of the Nation 2015-2016" succinctly expatiates this concern. *For instance, at first the responsibility for implementation of the Sanitation policy has recently been transferred from DWA to the Department of Human Settlements although sanitation has obvious linkages with water services provision. Secondly, the implementation of water policy assigned to the National Department of Water and Environmental Affairs, Provincial Department of Water and Environmental Affairs, Water Services Authorities, and Local Municipalities declared by the Minister to serve as Water Services Authorities and Water Boards is absurd. This prevailing lack of clarity is believed to create room for inefficiencies in the delivery of both water and sanitation services. The split between district municipalities and local municipalities is problematic for the same reasons. To date, all WSAs owe millions because no institution has taken responsibility to account for water; they all hide behind a Service Level Agreement that was never signed, hence, the citizens need water services. No local municipality is willing to inherit such an expensive project, especially with the culture of non-payment of services still evident. These are the signs that the three spheres of government are managing themselves; essentially, they are operating like federations. Lastly, there is lack of leadership, management and accountability towards attainable goals. However, a position must be taken in order for an individual institution to provide these services. All local municipalities must be declared water services authorities.*

The findings further revealed that there is no synergy between the several legislative frameworks meant to provide, manage and/or sustain services related to water and sanitation. The provision of free basic water services cannot be realised in communities that never received a drop of water through their communal taps. Although water is a basic right for all citizens, WSAs are struggling to equally distribute water and sanitation to all citizens. *The study findings also indicate that there are technical inconsistencies in ward committee meetings and public participation because not all community members attend such meetings, instead, they only do so for the sake of compliances.* Nevertheless, two wrongs never made

anything right; therefore, it can only be done by going back to the basics, that is, engaging with communities in order to effect some damage control, and apologisingfor neglecting them for such a long time.

5.2.3 Evaluation of the mandate of Water and Sanitation Authorities in Limpopo in terms of providing freshwater services and decent public health to communities

The findings revealed that all communities acknowledged and understood the mandatory obligations of WSAs to provide water and decent sanitation to their communities. Furthermore, administrators know their full obligations are to provide a reliable services to their communities but they are held-up by political interference and the lack of resources, especially the requisite human resources for specific technical responsibilities. *The community requires the provision of water and sanitation, not the constant excuses they receive from the government they elected. Local municipalities should be assisted to perform at all costs, and without delay. Both political and administrative office bearers must supplement each other in order to serve their citizens. The WSAs must live up to their mandate and stop doing what they are not mandated to do; if not, the other spheres of government must hold them accountable.*

Conflicting approaches to the provision of services between officials at the WSAs and those in WSPs were highlighted in the findings. Unhealthy working relationships emerged and caused deviation from the focus of ensuring that users ultimately receive the required services. Officials at local municipalities always placed the blame for failing to provide clean water and decent sanitation on the district municipality. Hence, the district municipality is mandated to provide water and sanitation. The local municipality (WSP) and the district municipality (WSA) sign the service level agreement (SLA), which is an attempt to ensure a healthy working relationship for the provision of water and sanitation. *However, monitoring and evaluation has been neglected during Jacob Zuma's tenure of government, therefore, the level of corruption has reached unacceptable proportions. It was never a strange thing to notice two Ministers addressing the media on water but uttering two different statements. It is clear that that there were no reporting systems in place, from the WSPs, WSAs, Provincial DWA, and National DWS, therefore, the governance collapsed.*

5.2.4 Explore the constraints faced by the Water Services Authorities in Limpopo Province in the delivery of water and sanitation amenities to its communities

WSAs, as an institution of government, are characterised by their own challenges. The findings of this study reveal capacity constraints related to skilled labour, especially in the technical or engineering section. Furthermore, financial mismanagement by political and administrative office bearers contributed to the collapse in the provision of water and sanitation. Therefore, the lack of efficiency and effectiveness in local government institutions breeds institutional capacity constraints and challenges. ***Nonetheless, unqualified personnel are deployed in local municipalities, done in the fashion of so-called 'cadre deployment', which is cited as the main stumbling block towards ensuring quality service delivery. Until individuals with proper skills are appointed in all technical and administrative posts, service delivery will never be realised.***

Further findings revealed that the development of new settlements and informal settlements threatens the positive distribution of water and sanitation. Communities opt to extend their territory without first checking details pertaining to the provision of water and sanitation with their WSAs. Spatial planning is not adhered to as communities continue to grab empty land and occupy it without the knowledge of how services will be provided to them. ***The attitude of traditional leaders, of distributing land to residents without communicating with the WSAs, also causes strain when plans are not in place to provide water and sanitation.***

5.2.5 Possible effective strategies for improving the provision of access to clean freshwater and decent sanitation to the affected communities in Limpopo

The findings reveal other possible strategies employed by various WSAs for ensuring access to drinkable water and decent sanitation. The study revealed that water tankers and communal taps are used in rural areas in order to provide clean water. However, the question of quality always resurfaces as water is contaminated and the municipalities are being accused of not doing enough to prevent this.

Furthermore, the other viable method that has proven effective is the drilling of boreholes within the communities, especially in rural areas. Water is a scarce commodity in South Africa. In order to supplement the scarcity of surface water, more boreholes are required for citizens in rural areas and informal settlements. However, the borehole model has not been propagated enough by the Department of Water Affairs and WSAs. ***Conversely, the boreholes that were drilled by most WSAs at highly inflated quotes projects, millions of public money were looted or misdirected purposely. Additionally, most of the boreholes are dysfunctional to date due to low quality materials employed. The machineries installed for boreholes are also vandalised***. In contrast, the main source of water in the farms are natural sources such as springs, streams and rivers; furthermore, some supplement weak springs with water from dams. Landowners assisted in installing piped water and tanks; hence, a few have clean potable water sources. Nevertheless, there are serious challenges facing those in remote rural areas; these challenges require special projects in order for them to be attended to, aside from the use of water tankers or erecting water reservoirs that provide water for such communities.

5.3 RECOMMENDATIONS OF THE STUDY

Given the critical issues raised in this study, the following recommendations are made:

5.3.1   Building effective and functioning water and sanitation infrastructure

One of the study findings is that the respondents criticised the inadequate and aged infrastructure that does not match current water and sanitation demands. While, this aged infrastructure is employed to deliver quality services. In order to attain a reliable and quality supply of water and sanitation, that better fits and is able to meet the challenges faced by these communities, it is imperative to upgrade the infrastructure. In addition, numerous projects meant to supply water to villages, pipes have been laid down. The infrastructure was expected to bring a lasting solution to the water shortages faced by numerous villages since 2005; to date, access water remains a problem.

Upgrading the capacity of the water infrastructure is the ***first radical*** step that the administrative office bearers have to undertake. There are propositions meant to guide WSAs

when upgrading water and sanitation infrastructure. **Firstly**, there is a need to undergo public scrutiny and perform viability studies, informed by the Sustainable Development Goals (SDGs), that is, to provide environmentally compliant and friendly high tech infrastructures before implementing any water and sanitation projects. *Secondly*, all water and sanitation structures should be designed in such a way that they are in line with the standard requirements and municipal Integrated Development Plan (IDP) and SDGs. *Thirdly*, the proposed changes for water and sanitation infrastructure should be thoroughly communicated to all stakeholders, in order that they are able to share their views and provide comments before these changes are implemented.

Moreover, the programme to maintain the infrastructure should be tightened while the quality of the new infrastructure should be long lasting. ***This could only be realised if the current level of corruption is minimised or eradicated. It is imperative to avoid inflating prices for infrastructure maintenance, as the budget for maintenance will be enough for the financial year***. Qualified engineers with good track records should be identified for the provision of quality services. In order to retain or attract skilled personnel, a good remuneration package should be offered. Water and sanitation handlers should always be visible and available to respond to emergencies, especially those related to water and sanitation crises. ***Therefore, local municipalities or WSAs should strategise on which model to follow in order to renew the aging infrastructure by replacing the old pipes with new ones. Even when you connect the new system with the old one, it must show a difference; innovation is required from water and sanitation technical senior managers.***

5.3.2 Institutional capacity-building, education, training and awareness-raising

During the interviews, it was revealed that there are no management, training and awareness campaigns or programmes undertaken. The accomplishment of quality services requires specialised skills to attain specific objectives; to improve service delivery; manage resources more effectively; and facilitate the problem solving and decision making processes. These will also require knowledgeable ward councillors in order to play a meaningful role. ***Therefore, municipal office bearers must have the basic competencies required to read and write.*** The

local municipalities must empower these office bearers with the capacity to deal with all crises pertaining to water and sanitation services. The WSAs and WSPs must collaborate with other stakeholders on developmental programmes. Once the question of capacity has been addressed, the monitoring and evaluation of these strategies will presumably be more effective.

However, if the WSAs do not have the capacity to oversee the implementation of water and sanitation strategies, as well as other aspects of their mandate, water shortages may be a consequence of WSA inefficiencies and poor management, rather than a deficiency of supply. WSAs together with WSPs should embark on a process of institutional re-alignment in order to ensure that Catchment Management Agencies are able to fulfil the role of implementing agents tasked with an array of water resource management functions.

5.3.3 Revival of efficient and effective water and sanitation forums

In order to address the real problem, there is a need to collaborate with other stakeholders with a view to establishing effective water and sanitation forums, which are functional. A multi-dimensional approach is crucial when dealing with water and sanitation issues. These water forums play a pivotal role because their input and contributions will impact on strategy implementation. The total dedication and commitment of the water and sanitation forum will be achieved through training programmes and workshops; these will assist in building and spread information, and facilitating effective participation, which will result in the role-players' ownership of the process.

These forums may be regarded as a community-intensive care system that provides regular, reliable and relevant local data, which is easily understood. The care system will take the form of providing information on the impact of government services on people at the local level, with a focus on poverty and inequalities. It should have a set of simple indicators that inspire service providers to provide uninterrupted water services and sanitation. The community intensive care system is understood to include the roles of observing, assessing,

evaluating and communicating critical aspects of the water cycle, including water services and water quality, in which citizens play a prominent role on the basis of their local knowledge. To be successful, thee forums need to be recognised and supported by local government and need to form part of the ward committee system at the local level.

5.3.4 Setting up pro-poor units to improve water and sanitation service delivery to communities

Based on the findings of this study, it is apparent that previously disadvantaged communities continue to be defenceless in accessing water and sanitation, even after the move towards a democratic government. Therefore, there are still a number of community protests throughout the country, with a specific call for water and sanitation. Moreover, technology would not be useful if behavioural change is not tackled; for behavioural change, one has to understand what underlies the behaviour as the first point, then focus on what the impact of that behaviour is – intrinsically, and on the environment extrinsically. There are cultural, social and religious norms that underlie behaviours around water and sanitation, all of which should be taken into consideration.
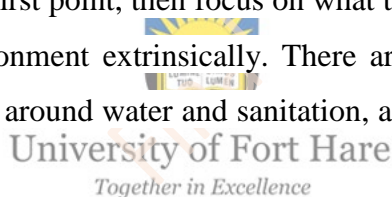
The approach to be taken here is that WSAs, whether publicly or privately owned, should be the primary drivers of water and sanitation service provision to all segments of the population. However, given the fact that the previously disadvantaged communities are poor and without access to affordable water and sanitation services, *WSAs should adapt their approach and structure in order to viably supply services to a significantly greater percentage of poor urban residents, informal settlements and rural areas.*

Comparatively, pro-poor units in Kenya, Tanzania, Uganda and Zambia have demonstrated that the approach taken by Water and Sanitation Service Institutions in serving the poor cannot be static. Good practices evolve through a learning process that evaluates changes in the environment, identifies successes and failures, and institutionalises lessons. In this respect, the Nairobi City Water and Sewerage Company's pro-poor unit was created primarily as a liaison unit; however, the unit is now launching a campaign to redefine its role in relation to the branch

offices in order for the branch offices to incorporate pro-poor targets. The company uses a participatory approach: it encourages regional staff to express the challenges they face and thereby propose practical solutions to resolve problems.

The establishment of pro-poor water and sanitation units will ensure that the WSAs proactively improve their services to the poor communities, rather than responding on an ad hoc basis. Ideally, a pro-poor unit should be structured in a way that allows it to lobby for actions and coordinated pro-poor activities across all WSAs and WSPs. This would include all sectors responsible for planning, commercial services, technical matters, human resources and communications. As a result, some common features for an effective pro-poor unit would be: management support, a clear mandate and incentives, adequate financial resources, and the appropriate mix of skills to be able to deliver services effectively.

To achieve extensive and lasting results, incentives (competitive salaries) should be established for all staff servicing the poor. A pro-poor unit could have the capacity for day-to-day operations. *In Uganda, Kampala's pro-poor branch office has been able to increase its revenue collection twenty-fold since its creation in 2006. It attributes this to a close relationship with customers. The pro-poor branch office connects approximately 50 new customers a month. There is a need to review the Kampala model before it is replicated in other rural provinces.*

5.3.5   Accountability and Monitoring and Evaluation imperative

As for accountability, there are political office bearers who neglected their responsibilities and their oversight role. Therefore, accountability for both administrative and political office bearers deteriorated to a state wherein community members could no longer bear this. Since 2007, the rate of violent community protests has reached a volatile state, which is marred by the destruction of government property. The demands of the communities were not met or addressed until members of the communities went on a rampage. The three spheres of

government distanced themselves from the needs of the ordinary people. The situations that occurred in places such as Vuwani and Malamulele should have been handled differently. Water and sanitation challenges that were reported at Matikoxikaya in Lulekani, in the Ba-Phalaborwa Municipality in 2008 were still unresolved in 2017. Accountability remains a strange matter for the three spheres of government. However, accountability requires taking spot-on decisions, implementing those decisions, and responding to challenges by providing feedback at all times. *The structural design of the intergovernmental system should enforce synergy between the work of all water and sanitation units. The reports pertaining to all units must be scrutinised, debated and followed through.*

The findings of the study indicated water projects have not been completed and, in those that have been completed, no drop of water has come through the taps. This represents a total failure to provide water services. Borehole water projects in the Mopani District Municipality, for example, were initiated; firstly, millions were budgeted for and spent on the project, but the monies remain unaccounted for. Secondly, these boreholes were drilled on paper, but they were not literally available. All this occurred because the implementation of these projects was not monitored. Monitoring and evaluation requires a system that is in place to organise a structure, manage processes, standards, strategies, plans, indicators, information systems, reporting lines and accountability relationships.

Importantly, the constitution of the Republic of South Africa provides for the establishment of oversight institutions to enhance monitoring and evaluation for good governance. These institutions are the Auditor General of South Africa (AGSA), the Human Rights Commission (HRC), and the Public Protector (PP). Logically, they are required to enforce financial management, enforce the rights of citizens to receive services, and ensure the protection of citizens. However, these institutions were compromised by the Zuma Administration, which was characterised by frequent cabinet reshuffling and transfers of officials from one department to another, thus weakening organisational stability and entrenching the patronage system. *Therefore, radical enforcement of monitoring and evaluation through AGSA, HSRC and the PP, amongst others, is critical to disrupting the status quo. In addition, the appointments*

of the heads of these oversight institutions must be removed from the Presidency and should be made by the Chief Justice.

5.4 AREAS FOR FURTHER RESEARCH

This study concentrated on analysing the capacity of the Limpopo Water Services Authorities to provide access to clean drinking water and decent sanitation. However, the encounters confronting WSAs and WSPs are complex and may not be resolved by the government alone, that is, without the participation of the private sector and other actors such as Civil Society Organisations (CSOs), the business community and public entities. In spite of the affirmations regarding cooperative government, there are challenges of cooperation and support for WSAs, which include intergovernmental fiscal relations, section 139 of the Constitution interventions, and a shortage of skilled personnel in the Public Service. *Therefore, an area for further research could be the introduction of an effective integrated water and sanitation governance structures and monitoring and evaluation mechanisms under robust public scrutiny to inform immediate and long-term interventions.*

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ANNEXURE A: PERMISSION LETTERS – REQUEST AND APPROVAL

University of Fort Hare
Together in Excellence

The Executive Mayor and Municipal Manager
Limpopo Province

Dear Sir/Madam

REQUEST FOR PERMISSION TO INTERVIEW MUNICIPAL FUNCTIONARIES AND COUNCILLORS AT THE DISTRICT MUNICIPALITY

Permission to conduct this study within the Municipal District is herewith humbly requested from the Executive Mayor, Municipal Council and Municipal Manager, before contact is made with participants. The purpose of this request is to collect primary data for a Doctoral qualification in the field of Public Administration and Management at the University of Fort Hare. The title of this study is: '*Examination of the capacity of Limpopo Water Services Authorities in providing access to clean drinking water and decent sanitation'.* The Water Services Authorities in Limpopo Province have been selected as the sample for this study. The aim of the study is to analyse the capacity and capabilities of the Water Services Authorities in the provision of water and sanitation services to local citizens, and the level of satisfaction experienced by consumers.

PURPOSE OF THE INTERVIEW

The means of collecting data will be in the form of interviews. The interviews with the participants will be conducted by the researcher personally. Each appointment will be made with the appropriate participants as per the approval of the municipality. While the results of the study will be disseminated via the completed doctoral thesis, municipalities in need of such results may forward their individual requests to the researcher.

CONFIDENTIALITY

As indicated above, your responses to this letter will be used for scholarly purposes only. Your personal details and feedback will not be shared with any other person. Confidentiality and anonymity will be maintain for all individual responses.

CONTACT DETAILS

Mr Kgoshi Kgashane Lucas Pilusa
Tel: 0157806417 (office) | Tel: 082 8090257 (cell) | Email: lucaspilusa@gmail.com

I trust that you will kindly grant me consent to conduct interviews with municipal employees and councillors within your municipality.

Regards,

Mr Kgoshi Kgashane Lucas Pilusa

ANNEXURE B: APPROVAL LETTERS

THABAZIMBI

MUNICIPALITY · MUNISIPALITEIT · MASEPALA

Alle Korrespondensie moet gerig word aan die Munisipale Bestuurder
All correspondence must be directed to the Municipal Manager
Mangwalo o the a lebswe go Molekamedi wa Masepala

Private Bag X 530
Thabazimbi
0380

Tel: 014 - 777 1525
Fax: 014 - 777 1531

Email:
info@thabazimbi.gov.za

Web:
www.thabazimbi.gov.za

MOPANI DISTRICT MUNICIPALITY

Private Bag X9687
Giyani
0826

Tel: +27 15 811-6300
Fax: +27 15 812-1301
E-mail: munjailer@mopani.gov.za

LETTER OF PERMISSION TO
CONDUCT RESEARCH

*Office of the Municipal
Manager*

To: Mr Pilusa KKL

From: Municipal Manager
Mopani District Municipality

Date: 11 January 2018

Re: Approval to Conduct Research - Yourself

1. Your letter dated 20 June 2017 refers, requesting permission to collect research study.

2. Permission is hereby granted to conduct research for your doctoral qualification titled *"Examination of the capacity of Limpopo Water Services Authorities in providing access to clean drinking water and decent sanitation"*. We believe that the opportunity granted by the Municipality to allow you to do research will enable you to fulfil the objective of your research study.

Regards,

Monakedi SR
Municipal Manager

Ref: 4/4

Enq: Mutoti N.W

Date: 24 January 2018

ATTENTION: Mr Kgoshi Kgashane Lucas Pilusa

RE: APPLICATION TO CONDUCT ACADEMIC RESEARCH: YOURSELF.

1. Your application dated 11 January 2018 refers
2. It is with pleasure to inform you that your request mentioned above is hereby granted to you.
3. Please contact Technical Manager at 082 805 6497 in order to arrange the starting date.
4. Should there be anything you need clarity on, feel free to call our office at 015 960 3558/015 960 3541

Kind Regards

MUNICIPAL MANAGER
MR RAMBADO M.R

1|2|2018
DATE

"A developmental municipality focusing on sustainable service delivery and socio-economic development towards an equal society"

249

SEKHUKHUNE
District Municipality

Eng: Mr. Pal Mathale
082 435 2065/ 013 262 7412
Ref: SK/11/3/13

Mr. Kgoshi Lucas Pilusa
Director in the Office of the Municipal Manager
Ba-Phalaborwa Municipality
Nelson Mandela Drive, Civic Centre
Private Bag X01020
Phalaborwa
1390

Re: REQUEST FOR PERMISSION TO INTERVIEW MUNICIPAL FUNCTIONARIES

The above matter bears reference.

In response to your letter dated the 11/01/2018, we hereby as a District municipality grant you permission to conduct the said research in our district.

We take this opportunity to wish you only the best in all your future endeavors.

Thanking you in advance.

MUNICIPAL MANAGER
N.T MASEKO
DATE: 61/2/2018

CAPRICORN
DISTRICT MUNICIPALITY

41 Biccard Street
P O Box 4100
POLOKWANE
0700

Tel: (015) 294 1000
Fax: 086 504 8549
Web: www.cdm.gov.za
E-mail: training@cdm.org.za

Reference No: 4/1/1/1/1

Enquiries: Angeline Bopape

Date: 31 January 2018

Mr Pilusa K.K L
University of Fort Hare

Dear Pilusa K.K.L

RE: REQUEST FOR PERMISSION TO COLLECT RESEARCH STUDY DATA

Your application for permission to collect research data bears reference.

We are pleased to inform you that your request has been approved. The questionnaire attached to the request will be handed to the relevant people as stated on your request and you will be contacted as soon as process is complete.

We wish you good luck on your research project.

Kind regards,

T.L.P NEMUGUMONI
ACTING MUNICIPAL MANAGER

31|01|2018
DATE

Bela-Bela Local Municipality

Chris Hani Drive, Bela-Bela, Limpopo. Private Bag X1609 Bela-
Bela 0480
Tel: 014 736 8000 Fax: 014 736 3288
Website: www.belabela.gov.za
OFFICE OF THE MUNICIPAL MANAGER

Enq: J Sekgale
Tel: 014 736 8000

22 February 2018

Mr KKL Pilusa

P. Box 135

PHALABORWA

1390

SUBJECT: PERMISSION TO CONDUCT SCHOLARLY RESEARCH AT BELA-BELA LOCAL MUNICIPALITY

1. The above matter bears reference.

2. The Municipality acknowledges receipt of your letter dated 22 February 2018. It is in this regard that Bela-Bela Local Municipality approves your request for permission to conduct scholarly research on the topic "Examination of the capacity of Limpopo Water Services Authorities in providing access to clear drinking water and decent sanitation.

3. The approval is granted for you to conduct interviews with employees and distribute questionnaires for data collection. However, it should be noted that the permission is granted on a condition that you will always observe and be bound by ethical standards of confidentiality, respect and sensitivity for participants.

4. Bela-Bela Local Municipality wishes you well in your studies.

Yours faithfully

MR FR NTEKELE

ACTING MUNICIPAL MANAGER

SEKHUKHUNE
District Municipality

Private Bag X8611 Groblersdal 0470, 3 West Street Groblersdal 0470
Tel : (013) 262 7300, Fax. (013) 262 3686
E-Mail : sokinfo@sekhukhune.co.za

Enq: Mr. Pal Mathale
082 435 2085/ 013 262 7412
Ref: SK/11/3/13

Mr. Kgoshi Lucas Pilusa
Director in the Office of the Municipal Manager
Ba-Phalaborwa Municipality
Nelson Mandela Drive, Civic Centre
Private Bag X01020
Phalaborwa
1390

Re: REQUEST FOR PERMISSION TO INTERVIEW MUNICIPAL FUNCTIONARIES

The above matter bears reference.

In response to your letter dated the 11/01/2018, we hereby as a District municipality grant you permission to conduct the said research in our district.

We take this opportunity to wish you only the best in all your future endeavors.

Thanking you in advance.

MUNICIPAL MANAGER
N.T MASEKO
DATE: 61|2|2018

CAPRICORN
DISTRICT MUNICIPALITY

41 Biccard Street
P O Box 4100
POLOKWANE
0700

Tel: (015) 294 1000
Fax: 086 504 8549
Web: www.cdm.gov.za
E-mail: training@cdm.org.za

Reference No: 4/1/1/1/1

Enquiries: Angeline Bopape

Date: 31 January 2018

Mr Pilusa K.K L
University of Fort Hare

Dear Pilusa K.K.L

RE: REQUEST FOR PERMISSION TO COLLECT RESEARCH STUDY DATA

Your application for permission to collect research data bears reference.

We are pleased to inform you that your request has been approved. The questionnaire attached to the request will be handed to the relevant people as stated on your request and you will be contacted as soon as process is complete.

We wish you good luck on your research project.

Kind regards,

T.L.P NEMUGUMONI
ACTING MUNICIPAL MANAGER

31|01|2018
DATE

Re Soma le Setšhaba

Anti-FraudØine 0800 20 50 55

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ANNEXURE C: INTERVIEW GUIDE

EXAMINATION OF THE CAPACITY OF LIMPOPO WATER SERVICES AUTHORITIES IN PROVIDING ACCESS TO CLEAN DRINKING WATER AND DECENT SANITATION

Research Instrument

22 September 2016

Contact persons:

Kgoshi Kgashane Lucas Pilusa

Student No. 201406085

Email: lucaspilusa@gmail.com

Cell: 0828090257

Approved, 26 September 2016

INTERVIEW GUIDE FOR MUNICIPAL MANAGERS, MUNICIPAL DIRECTORS, COUNCILLORS AND COMMUNITY MEMBERS

GENERAL OVERVIEW

The researcher is committed to ensuring that the efforts of this study produce excellent outputs that will practically contribute towards strengthening the knowledge base on water and sanitation service delivery at the local government sector in South Africa. The research project will provide insight into the type of intervention that offers the most potential for resolving current and future challenges in accessing water and sanitation services. In the long term, this will contribute towards the development of an early warning system to detect these types of service problems while they are still latent, and to intervene before they reach the manifest phase so that their human and material costs are minimised. Overall, the research will, at all stages, reflect the mission, vision and values of the developmental local government and conform to its ethical standards.

RESPONDENTS

The in-depth interviews target Municipal Managers, Municipal Directors, Municipal Councillors and Members of the Communities.

GUIDELINES

Kindly be informed that the information gathered during this research will be treated as highly confidential as possible, in accordance with the University of Fort Hare Research Ethics Committee and, as such, the anonymity and dignity of the respondents will be protected. The researcher herewith appeals to all respondents to please answer all the questions fielded. Researchers are also informed that the value of this interview depends entirely on your honesty and your co-operation, which are highly appreciated.

PROCESS

Before the data collection process begins, ethics approval will be sought to conduct the research in the Municipalities that are Water Services Authorities in Limpopo Province. Prior notification will be given to the research participants who will be interviewed. As such, anonymity of the organisations and the interviewees will be maintained. The researcher will take notes during the interview process. The respondent will be asked to consent to the audio-recording and transcription of the primary data obtained from the interview.

COMMUNICATION

The mode of communication during the interviews is verbal. The researcher will ask questions in order to gather the opinions and ideas of the sampled research participants, as pertaining to the issue under study.

DISCLAIMER

The interview guide has been drawn solely for the research project undertaken by the researcher in order to examine the capacity of water services authorities in providing access to clean drinking water and decent sanitation.

DEMOGRAPHIC AND KEY QUESTIONS

Interview Guide for Municipal Managers, Municipal Directors, Municipal Councillors and Members of the Communities.

DEMOGRAPHIC QUESTIONS

Questions	Prompts	Mark with 'X'
Age	18 to 30yrs	
	31 to 40yrs	
	41 to 50yrs	
	+ 50yrs	

Gender	Mark with 'X'
Male	
Female	

Key Questions	Prompts
1. How does the ward councillor assist in ensuring that all citizens access clean water and decent sanitation? ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… …………………………………………………………………………………	Policy
2. Explain if there are alternative means of accessing water if water is not running through taps. ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………	Policy
3. In your view, is it necessary for citizens to pay for water and sanitation. Give reasons for your answer? ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… ………………………………………………………………………………… …………………………………………………………………………………	Policy

	………………………………………………………………………………………… …………………………………………………………………………………………	
4.	What is your view of the municipality's ability to provide sufficient clean drinking water and decent sanitation to all in the community?	Capacity
5.	In your view, how knowledgeable are municipal officials or service providers in terms of the maintenance of water services infrastructure and sanitary services? Elaborate. ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………	Capacity
6.	Is the municipality doing enough to ensure that there is quality water and decent sanitation in order to restore human dignity and ensure quality of life for all?	Challenges/ Constraints
7.	What problems and challenges are experienced by the community in your municipality in accessing sufficient clean drinking water and decent sanitation? ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………………………………………………..............	Challenges/ Constraints
8.	If you recall, have any general complaints about the shortage of water and sanitation been lodged by the community? If so, were they processed and has feedback been provided to the community. ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………	Challenges/ Constraints

9.	Do you think the recent service delivery protests in your area (Municipality) are an indication of a lack of public participation and regular communication between the Council and the community? ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………………………………………………………………	Challenges/ Constraints
10.	Do you think there are adequate budget/funding and financing mechanisms for water and sanitation projects supported by appropriate institutional frameworks in the municipality? ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………………………………………………………………	Strategy/ Interventions
11.	In your view, why is the municipality granted Water Services Authority accreditation status to provide clean drinking water and decent sanitation? ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………………………………………………………………	Mandate
12.	Does the community receive basic free water and if so, is this implementable and sustainable? ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………………………………………………………………	Mandate
13.	Do you think it is reasonable for consumers to pay for water and sanitation? Why do you say so? ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………………………………………………………………	Mandate
14.	In your view, do you think there are households in your area that are exposed to open defecation or that have no proper latrines/sewerage? ………………………………………………………………………………………… …………………………………………………………………………………………	Mandate

…………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… ………………………………………………………………………………		
15. Is there any monitoring and evaluation system that is implemented to ensure that the effective delivery of clean water and sanitation is employed? Explain. …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… ………………………………………………………………………………	Strategy/ Interventions
16. Are there any significant plans in place to ensure that all citizens in your area receive clean water and sanitation? …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… ………………………………………………………………………………	Strategy/ Interventions
17. What is your view regarding the fact that only consumers in town and townships pay for water and sanitation, and village consumers do not? Explain. …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… ……………………………………………………………………………..	Challenges/ Constraints
18. Are you satisfied with the provision of water and sanitation by the municipality? Elaborate. …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………	Challenges/ Constraints
19. In your view, do you think there are households that experience difficulties in accessing clean drinking water and sanitation? …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… ……………………………………………………………………………	Challenges/ Constraints

…………………………………………………………………………………… ……………………………..	
20. In your view, is there a constructive global initiative/model for water and sanitation, with a coherent framework that could be adapted to suit the South African local government? …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… …………………………………………………………………………………… ……………………………………………………………………………………	Strategy/ Interventions

Thank you for your collaboration and your time spent in this interview!

University of Fort Hare

Together in Excellence

ANNEXURE D: CONSENT LETTER

University of Fort Hare
Together in Excellence

Informed Consent Letter

To: Participants must read the declaration/terms below

I hereby agree to participate in the study titled **Examination of the capacity of Limpopo Water Services Authorities in providing access to clean drinking water and decent sanitation.** I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop this interview at any point should I not want to continue to participate in the study, and that this decision will not in any way affect me negatively.

I understand that this is a research project with a purpose that will not necessarily benefit me personally.

I understand that this consent form will not be linked to the interview guide, and that my answers will remain confidential.

I understand that, if at all possible, feedback regarding the results of the completed research will be given to my community.

I hereby agree to the tape recording of my participation or any record keeping conducted in the study.

……………………………………………………………………………………………………..
Names of the Participant

………………………………………………………..   …………………………..
Signature of the Participant   **Date**

ANNEXURE E: ETHICAL CLEARANCE CERTIFICATE

University of Fort Hare

Together in Excellence

ETHICAL CLEARANCE CERTIFICATE
REC-270710-028-RA Level 01

Certificate Reference Number: KAN011SPIL01

Project title: **Examination of the capacity of Limpopo water service authorities in providing access to clean drinking water and decent sanitation.**

Nature of Project: PhD in Public Administration

Principal Researcher: Kgoshi Kgashane Lucas Pilusa

Supervisor: Prof M.H Kanyane
Co-supervisor: N/A

On behalf of the University of Fort Hare's Research Ethics Committee (UREC) I hereby give ethical approval in respect of the undertakings contained in the above-mentioned project and research instrument(s). Should any other instruments be used, these require separate authorization. The Researcher may therefore commence with the research as from the date of this certificate, using the reference number indicated above.

Please note that the UREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the document
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

The Principal Researcher must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

Special conditions: Research that includes children as per the official regulations of the act must take the following into account:
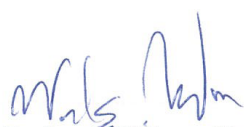
Note: The UREC is aware of the provisions of s71 of the National Health Act 61 of 2003 and that matters pertaining to obtaining the Minister's consent are under discussion and remain unresolved. Nonetheless, as was decided at a meeting between the National Health Research Ethics Committee and stakeholders on 6 June 2013, university ethics committees may continue to grant ethical clearance for research involving children without the Minister's consent, provided that the prescripts of the previous rules have been met. This certificate is granted in terms of this agreement.

The UREC retains the right to

- Withdraw or amend this Ethical Clearance Certificate if
  - Any unethical principal or practices are revealed or suspected
  - Relevant information has been withheld or misrepresented
  - Regulatory changes of whatsoever nature so require
  - The conditions contained in the Certificate have not been adhered to

- Request access to any information or data at any time during the course or after completion of the project.

- In addition to the need to comply with the highest level of ethical conduct principle investigators must report back annually as an evaluation and monitoring mechanism on the progress being made by the research. Such a report must be sent to the Dean of Research's office

The Ethics Committee wished you well in your research.

Yours sincerely

Professor Wilson Akpan
Acting Dean of Research

08 November 2016

ANNEXURE F: EDITOR'S REPORT

NELSON MANDELA

UNIVERSITY

PO Box 77000, Nelson Mandela University, Port Elizabeth, 6031, South Africa   mandela.ac.za

28 March 2018

To Whom it May Concern

I herewith confirm that I have proofread the following dissertation:

Title of Study:	*EXAMINATION OF THE CAPACITY OF LIMPOPO WATER SERVICES AUTHORITIES IN PROVIDING ACCESS TO CLEAN DRINKING WATER AND DECENT SANITATION*
Student Name:	Kgoshi Kgashane Lucas Pilusa
Student Number:	201406085
Institution:	University of Fort Hare
Qualification:	PhD (Public Administration)

I suggested relevant changes, where I saw fit, using the "Track Changes" function in MSWord; the student could thus either accept or reject the suggested changes at his own discretion.

I trust that this is in order.

Kind regards,

Nancy Morkel
MA English (NMMU), PGDHET (UFH), BA Hons English (UPE), BA MCC (UPE)
Editing Methodology (SU), Editing Practice (SU)
nancy.morkel@mandela.ac.za