

**SERVICE DELIVERY CHALLENGES IN THE PROVISION OF SUSTAINABLE
SANITATION AND CLEAN WATER: THE CASE OF CAPRICORN DISTRICT
MUNICIPALITY, LIMPOPO PROVINCE**

by

PHUTI ALFRED PATRICK MABOTHA



**A THESIS SUBMITTED IN FULFILMENT FOR THE DEGREE OF DOCTOR OF
ADMINISTRATION**

in

PUBLIC ADMINISTRATION

in the

FACULTY OF MANAGEMENT AND LAW

(School of Economics and Management)

at the

UNIVERSITY OF LIMPOPO

2022

SUPERVISOR: DR. K. R. CHAUKE

DEDICATION

I dedicate this project to the civilians who unfortunately do not have sustainable supply and appropriate sanitation despite having been promised better living conditions for more than two centuries. Vision 2030 has been goal shifted and is now vision 2063 yet the world is in 2022.

With the hope that there shall be positive results.

DECLARATION

This thesis is submitted under the University of Limpopo's regulations for the award of Doctor of Administration Degree. I, Phuti Alfred Patrick Mabothe, Student Number 9731796 declare that this thesis was not previously submitted by me for any other degree at the University of Limpopo or at any other university or institution of learning. This is my work in design and in execution; all materials contained herein are duly acknowledged.



Phuti Alfred Patrick Mabothe

01 September 2022

Date

ACKNOWLEDGEMENTS

It is said fearing God is the beginning of wisdom, where wisdom ends belief starts. Sincere gratitude is directed to the beloved heroes and heroines who fell fighting fearlessly to make education a right for all men and woman on the African continent in securing the right to study at any university.

I am expressing my gratitude to Dr. Richard Chauke for the incessant academic engagement and for the scientific testing of the study's phenomenon.

Special thanks to my family, friends, and colleagues who encouraged me and reminded me that research is a project and not an event that comes and goes in a day. To the study's respondents, thanks for the information that you provided and for contributing to the study.

ACRONYMS

CMA	Catchment Management Agency
COHGSTA	Co-operative Governance, Human Settlement and Traditional Affairs
DDM	District Development Model
DWA	Department of Water Affairs
DWS	Department of Water and Sanitation
DWAF	Department of Water Affairs and Forestry
IUDF	Integrated Urban Development Framework
IDP	Integrated Development Programme
MDG	Millennium Development Goal
MEC	Member of the Executive Committee
MNF	Minimum Night Flow
NDP	National Development Plan
NWA	National Water Act
O & M	Operation and Maintenance
OSS	On Site Sanitation system
PMT	Political Management Team
PPP	Public Private Partnership
PRV	Pressure Reduction Valves
PSP	Private Sector Participation
RDP	Reconstruction and Development Programme
SAHRC	South African Human Rights Commission
TAC	Thematic Content Analysis
VIP	Ventilated Improved Pit Latrine
WHO	World Health Organisation
WWTP	Wastewater Treatment Plant

ABSTRACT

South Africa is a country experiencing water scarcity, and the provision of water as well as sanitation is a basic need and a right that must be provided to the populace by the municipalities. The water must either be subsidised by the government through the Municipal Infrastructure Grant or financed through the municipality's resources. The Capricorn District Municipality is composed of the Polokwane, Molemole, Lepelle Nkumpi, and Blouberg local Municipalities. Amongst all these municipalities, there is high rural domination and the inability to provide water daily in most jurisdictional areas.

In achieving the objectives and addressing factors that impact negatively on sustainable supply of water and effective sanitation within Capricorn District Municipality the study adopted, the theory of rising expectations, the philosophy of servant leadership, the public choice theory, the district's development plan, the rational model of reasoning and the participatory research paradigm because the study addresses the societal issues that affect mostly marginalised groups.

The study used a mixed method research methodology that is dominated by the qualitative method. Quantitative method is used to justify availability of water and sanitation to the Capricorn District's civilians while the qualitative method was used to investigate the cause and effect of the non-provision of sustainable water as well as sanitation.

The study established that there are some hindrances that were found in the *focus* area (Capricorn District Municipality) because of; illicit activities, poor infrastructural maintenance, and the need to establish an enabling environment by the politicians as well as the officials with no interference in the running of the administrative affairs.

Key Words: Water, sustainable, municipality and the Capricorn District Municipality

TABLE OF CONTENTS

DEDICATION.....	I
DECLARATION.....	II
ACKNOWLEDGEMENTS.....	III
ACRONYMS.....	IV
ABSTRACT	V
LIST OF TABLES.....	XI
LIST OF FIGURES	XII
CHAPTER 1: INTRODUCTION AND BACKGROUND	1
1.1 Introduction and background.....	1
1.2 Research Problem.....	3
1.3 Purpose of the study.....	4
1.3.1 Research aim	4
1.3.2 Research objectives	4
1.4 Research Questions.....	5
1.5 Definition of key terms.....	5
1.6 Research design and methodology	6
1.6.1 Research design	6
1.6.2 Sampling	6
1.6.3 Data collection, methods, and techniques	7
1.6.4 Data analysis.....	8
1.6.5 Reliability, validity, and objectivity.....	8
1.6.6 Bias.....	9
1.7 Ethical considerations	10
1.8 Significance of the proposed research.....	11
1.9 Outline of the study.....	11
CHAPTER 2: THEORETICAL LITERATURE	13
2.1 Introduction and background	13

2.2	Defining the theoretical framework in the study	13
2.3	Characteristics of the theoretical literature in the study	13
2.4	Theoretical literature	14
2.4.1	Theory of rising expectation	14
2.4.2	Philosophy of servant leadership.....	17
2.5	Public choice theory	21
2.5	Agency theory	23
2.5.1	History of the agency theory.....	23
2.5.2	The agency theory and municipal governance	25
2.5.3	Application and Configuration of Theoretical Frameworks.....	26
2.6	National development plan (NDP)	27
2.7	Integrated Urban Development Framework (IUDF) and District Development Model (DDM).....	27
2.8	Defining the District Development Plan.....	28
2.8.1	Objectives of the DDM.....	28
2.8.2	Implementing the DDM.....	29
2.8.3	Alignment of DDM to IDUF philosophies	29
2.8.4	One District, One Budget, and One Plan.....	30
2.9	Position of the theoretical framework.....	31
2.9.1	Components of the theoretical framework	31
2.10	Position of the conceptual framework.....	33
2.11	Models in solving water and sanitation.	34
2.11.1	Factors to consider in developing the management model.....	34
2.12	Legislative framework.....	35
2.12.1	The provision of water services delivery is based on the following legislation.....	36
2.12.2	The Constitution of the Republic of South Africa - Act (108 of 1996)	36
2.13.3	The Water Services Act (Act 108 of 1997).....	37
2.13.4	The National Water Act (36 of 1998)	37
2.12.3	The Municipal Finance Management Act (56 of 2003).....	38
2.12.4	The Municipal Systems Act – (Act 32 of 2000)	38
2.12.5	Strategic Framework for Water Services (2003)	39
CHAPTER 3:	EMPIRICAL LITERATURE REVIEW	40
3.1	Introduction	40
3.1	Causes and failures in the provision of sustainable sanitation.....	41
3.2	Causes of poor service delivery.....	43
3.1.1	Audit / financial perspective.....	43
3.1.2	Politics administration dichotomy in municipal governance.....	45
3.1.3	Corruption	46

3.3	Elements of good governance	48
3.1.4	Accountability	48
3.1.5	Availability of information and transparency.....	49
3.1.6	Addressing the service delivery challenges in local government.....	50
3.1.7	Rule of law	50
3.1.8	Independent judiciary	51
3.1.9	Wastewater infrastructure challenge.....	52
3.1.10	Adaptive risk management planning / budget allocation	52
3.1.11	Service delivery agencies.....	53
3.4	Service delivery in Africa	54
3.1.12	Government and service delivery	55
3.5	Environmental impacts on service delivery	56
3.1.13	Political environment	56
3.1.14	Economic environment.....	58
3.1.15	Administrative cultural environment.....	59
3.1.16	Legal environment.....	60
3.6	Establishment of the water Catchment Management Agency (CMA) in South Africa	61
3.1.17	Challenges in the establishment of the water Catchment Management Agency (CMA) in South Africa.....	61
3.1.18	Fixing the plane on air	62
3.1.19	The role of the water Catchment Management Agency (CMA) in water supply	63
3.1.20	Effective cost management systems of water conservation and sanitation management	64
3.1.21	Improved, effective, and efficient supply of water and sanitation	66
3.1.22	Impact of overpopulation on sewage systems	67
3.7	Conclusion.....	68
CHAPTER 4: RESEARCH METHODOLOGY		69
4.1	Introduction	69
4.2	Research methods	69
4.3	Research design.....	70
4.3.1	Sampling techniques	71
4.3.1	Population	72
4.3.2	Sampling	72
4.3.3	Ethical issues related to sampling.	74
4.3.4	Data Collection.....	75
4.3.5	Data analysis.....	78
4.4	Internal and external validity of the study	79
4.5	Conclusion.....	80
CHAPTER 5: DISCUSSION / PRESENTATION /INTERPRETATION OF FINDINGS.....		81

5.1	Introduction	81
5.2	Data management and analysis.	82
5.2.1	Population count.....	82
5.2.2	Age count.....	83
5.2.3	Marital status.....	83
5.2.4	Ethnic group.....	84
5.2.5	Employment status.....	85
5.2.6	Water tap location	86
5.2.7	Frequency of receiving water.....	87
5.2.8	Type of residential area.....	88
5.2.9	Water meter available in the yard.....	89
5.2.10	Lined and unlined latrines.....	90
5.2.11	Investigation question 2.....	97
5.2.12	Investigation question 3.....	103
5.2.13	Investigation question 4.....	104
5.3	Research results	109
5.3.1	Consultation	110
5.3.2	Corruption	112
5.3.3	Skills.....	116
5.3.4	Deployment.....	119
5.3.5	Planning	120
5.3.6	Theft.....	122
5.4	Overview of research findings.....	131
5.4.1	Fulfilment of the research objectives	133
5.5	Conclusion.....	136
CHAPTER 6: RECOMMENDATIONS AND CONCLUSION.....		137
6.1	Introduction	137
6.2	Interpretation of the research findings.....	137
6.2.1	Develop a program management framework.....	137
6.2.2	Proposed framework to solve water and sanitation in the district municipality.	139
6.3	Recommendations	142
6.3.1	Recommendations to the municipal administrators.....	142
6.3.2	Recommendations to the Catchment Management Agencies (CMA)	144
6.3.3	Recommendations to the study 'locus	144
6.4	Contributions of the study.....	145
6.5	Limitations of the study	145
6.6	Conclusion.....	146
CHAPTER 7: SUMMARY AND CONCLUSION		147
7.1	Research Overview	147

7.2	Research problem, question, investigative sub question and objectives.....	150
7.2.1	Research problem	150
7.2.2	7.2.2 Research question.....	151
7.2.3	Aim of the research	151
7.3	Theoretical and conceptual framework	153
7.4	Methodological framework	153
7.5	Development of research instruments.....	154
7.5.1	Sampling strategy.....	154
7.5.2	Description of the research procedure.....	155
7.6	General summary	155
	REFERENCES	157
	ANNEXTURES	177
	ANNEXTURE B.....	180
	ANNEXTURE C.....	181
	ANNEXTURE D.....	182
	ANNEXTURE E	183
	ANNEXTURE F	184
	APPENDIX G.....	187
	ANNEXTURES H.....	188
	ANNEXTURE I.....	189

LIST OF TABLES

Table 5.1: Population count.....	82
Table 5.2: Age Count	83
Table 5.3: Marital status	83
Table 5.4: Ethnic Group	84
Table 5.5: Employment status.....	85
Table 5.6: Tap location.....	86
Table 5.7: Frequency of receiving water	87
Table 5.8: Ablution facility type.....	88
Table 5.9: Type of residential area	88
Table 5.10: Water meter available in the yard.....	89
Table 5.11: Lined and unlined toilets.....	90
Table 5.12: Source powering water supply	91
Table 5.13: Respondent's summary.....	109

LIST OF FIGURES

Figure 2.1. Position of theoretical framework.	31
Figure 2.2. Position of conceptual framework.	33
Figure 4.1: Sample frame in relation to population and sample	72
Figure 5.1: Population count	82
Figure 5.2: Age count.....	83
Figure 5.3: Marital status.....	84
Figure 5.4: Ethnic group	84
Figure 5.5: Employment status.....	85
Figure 5.6: Tap location.....	86
Figure 5.7: Frequency of receiving water	87
Figure 5.8: Ablution facility type	88
Figure 5.9: Type of residential area.....	89
Figure 5.10: Water meter available in the yard.....	89
Figure 5.11: Lined and unlined toilets.....	90
Figure 5.12: Source powering water supply	91
Figure 5.13: Themes acquired and developed during interviews.	110
Figure 5.14: Themes acquired and developed from interviews.	110
Figure 9.1: Proposed framework to solve the municipal problems	137
Figure 9.2: Proposed framework for sustainable water supply	139
Figure 9.3: Proposed framework for sanitation.....	141
Figure 11.1: Frequently said words	156

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Introduction and background

South Africa has become a water scarce country. This water scarcity has an impact on the delivery of sanitation and water quality both in the rural and urban dwellings. The majority of the rural areas utilise water that comes from the rivers, the natural fountains and from limited municipal water taps. Water for the urban dwellings is delivered by the municipality, recently there is a high mushrooming of boreholes because of the little supply and water shortage. The water quality management becomes a problem when it comes to the water that is acquired from the rivers, the fountains and the boreholes as the municipality is only responsible for the piped water supply. The delivery of water and sanitation is a basic need as well as a right that must be provided by the municipalities and it must be subsidised by the government through the Municipal Infrastructure Grant amongst other grants (Furlong, 2012:2741; Sutherland, Hordijk, Lewis, Meyer & Buthelezi, 2014:469).

In addressing the inability to deliver water and sanitation following post-apartheid government, the scope of the water agencies and the responsibilities of the municipalities have been clarified in the government's policy orientation (AMCOW, 2015:2). This was further supported by President Cyril Ramaphosa's predecessor, Jacob Zuma in 2014 when addressing the nation. He highlighted that uprisings being experienced were not only the consequences of the government's failures, but they were also due to the success of delivering basic services (Balkaran 2014:26). The president further indicated that, "Success is also the breeding ground of rising expectation" (Van Wyk, 2015:1). This, therefore, brings forth the theory of rising expectations (Odendaal, 2016:289; Balkaran, 2014:27).

When providing quality water and sanitation in the local sphere of government, it is required that there should be an establishment of an environment which is user friendly by the politicians and officials with no interference in the running of the administrative affairs. Furthermore, to have clean water provision, sanitation and infrastructure maintenance, there is a need to adopt good governance principles, practices, and strategies because they are the driving force of improved service delivery (Patrick, 2021:8; Hanyane & Naidoo, 2015:241). This approach was

supported by the Mayor of Senqu Municipality who mentioned that “corruption depends on the behavior of those leading the municipality. I do not interfere in the tenders and finances – politicians should not be involved in that, as that is the space for others employed to do those jobs. My job is to ensure those jobs are done” (Patrick, 2021:8).

The Auditor General in the 2019/2020 report further supported these sentiments by indicating that, “clean books mean clean streets and stable leadership leads to better governance”. This seems to be proved by the situation which is being experienced by the Mangaung Local Municipality which includes Bloemfontein in the Free State province where sewage flows like lava down the street. Some water leakages started in 2019 and no proper maintenance was done, consequently the water loss ballooned the Bloemfontein water bill to over a billion rands. In some streets, there are potholes which are caused by continuous running water and there is also blocked sewage which is caused by the infrastructure which is not coping because the pipes were not designed to service the current population (Patrick, 2021:8). This is the situation in the Polokwane Municipality as is highlighted by the study conducted by Mabothe, Netswera and Ganda (2019:142).

In trying to solve the current local government problems of supplying water and sanitation to the municipal populace, it is important that accountability, responsibility, and accessibility are adhered to as they are principles of good governance. Non-compliance to the local government’s implementation measures or the flouting of policies as well as by-laws, the lack of infrastructural investment, poor quality services and low revenue will contribute to service delivery failures as witnessed in utmost parts of the municipalities in South Africa which are characterised by protest marches (Furlon, 2014:2722; CBC News, 2010).

The highest failure to deliver quality services in South Africa as emphasised by the Institute of Risk Management South Africa (IRMSA) and the Public Service Accountability Monitor (PSAM) of the United Nations is “poor service delivery is due to governance practices” and stable leadership more specifically in the local sphere of the government (Hanyane & Naidoo, 2015:241). For instance, in the Senqu local municipality, the mayor served a full five-year term, while the municipal manager served for 20 years. The chief financial officer served for 16 years, and they obtained

a clean audit for the period 2019/20. The Mangaung local municipality got an unqualified report with serious supply chain management issues while it was under administration. The instability resulted in the municipality being led by an acting Mayor, as the city manager was suspended with full pay. The acting manager was appointed to run the municipal affairs while the suspended manager was being investigated for maladministration and corruption (Patrick, 2021:8).

The failure to deliver services effectively, efficiently, and economically is created by the instable human resources in most municipalities, for an example Mogalakwena local municipality, based within the Waterberg district municipality of the Limpopo province, has a mayor who had been ousted came back and persuasively reinstated himself with armed police assistance and bodyguards. The instability negatively hampered the municipality's basic operations comprising the provision of water and sanitation. During the period 2011 to 2017, the institution was led by six political heads and administratively in an acting capacity seven (Phadi, Pearson & Lessafi, 2018:5). In terms of the Auditor General's report, the local municipality "had an adverse audit opinion for the 2019/2020 financial year period" despite having finance staff causing a R111m annual salary bill due to the instability of staff and the chief financial officer's position being vacant and held by different officials on an acting capacity (Güles, 2021:8). The South African problems of supplying consistent running water as well as effective sanitation are worsened by the Wastewater Treatment Plants (WWTP) that are run by unskilled technical staff such as the Seshego WWTP and the Lephalale Municipality (Mbeki & Phago, 2014:212; Machaka & Leshiba, 2019). The study investigated the causes of poor sanitation and the insufficient provision of clean water by the post-apartheid government in the Capricorn District Municipal areas.

1.2 Research Problem

Capricorn District Municipality "as the water service authority is facing water and sanitation challenges" due to theft, ageing infrastructure, and the rapid loss of water quality. Poor water and poor sanitation service delivery compromise the people's rights, and they devalue their dignity as well as attract unrests in the communities. Generally, water and sanitation provision in South African municipalities is an increasing problem.

Most of the wastewater treatment plants are in a serious state of decay, due to the poor planning that is shown by the high effluent volumes, poor operation and maintenance of wastewater, staff incompetency, as well as due to dilapidated sewage treatment infrastructure (lack of proper infrastructural investment). The poor planning accompanied by poor operation and poor maintenance might also lead to the poor enforcement of environmental laws (flouting of policies). Failure to adhere to the effluent laws leads to the pollution of water resources which most rural communities' inhabitants rely on for their daily chores. Consequently, there is a direct negative impact on, human health, the environment, and the ecosystem. There is also the contamination of the main water sources for the Capricorn District Municipality's inhabitants.

1.3 Purpose of the study

1.3.1 *Research aim*

The aim of the study is to examine the reasons for the Capricorn District Municipality's continuous inefficient sanitation and the insufficient clean water supply in the post-apartheid government in the urban and rural communities.

1.3.2 *Research objectives*

The study anticipates accomplishing the following objectives, which are to:

- Investigate the causes of the poor delivery of clean water and proper sanitation facilities to the citizens of the Capricorn District Municipality.
- Examine the role of the Catchment Management Agencies (CMA) in the provision of clean municipal water.
- Evaluate the effectiveness of the cost management systems of water conservation and sanitation management.
- Probe how water and sanitation can be improved and supplied effectively and efficiently to the citizens of the Capricorn District Municipality.
- Develop a program management framework for the delivery challenges in the provision of water and sanitation.

1.4 Research Questions

- What is the origin of the inefficient delivery of clean water and sanitation to the citizens of the Capricorn District Municipality?
- What is the role of the CMA in the provision of clean water in the Capricorn District Municipality?
- How effective is the cost management system of water conservation and sanitation management?
- How can the supply of water and sanitation to the citizens of the Capricorn District Municipality be improved to ensure efficiency and effectiveness?

1.5 Definition of key terms

The study adopted and used the below definitions:

District development model - A model for operationalising, refining cooperative governance and build a capable, ethical developmental state (CoHgota, 2021).

Sanitation: Implies the totality of facilities, principles of hygiene and the performs that are related to the protected compendium, deletion, or discarding of human excreta (Antwi-Agyel, 2009). In this study, sanitation suggests the safe means of ablution facilities such as lined toilets, Ventilated Improved Pit (VIP) toilets and water-borne facilities that transport faecal to the wastewater treatment plant.

Service delivery: Is the disbursement of essential resources that people depends on such as water, electricity, sanitation infrastructure, land, and housing” for their livelihoods (Chen, Dean, Frant & Kumar, 2014:1; Bohler-Muller, Davids & Roberts, 2016:3). This study, define service delivery as the provision of clean water and hygiene ablution services to the people.

Municipality / local government: It is the significant sphere of government meant to delivering services as per mandate with skilled, proficient administrators and political office bearers mandated to provide effective and efficient local services to the communities (Sebola, 2015:10). Majekodunmi (2012)’s definition of the local government is that fragment of the government which is nearest to the people at the grassroots stage. Prett (2004 as cited in Koma, 2010:113) provided the definition of local government to be the lowest level of the government sphere located within the

communities with the intention of responding to the local requirements, the welfares, and the hopes of the local people (Ndou & Sebola, 2017:199). In this case, “municipality” refers to the Capricorn District Municipal area which covers Molemole, Polokwane, Lepelle – Nkumpi and the Blouberg local municipalities.

Sustainable sanitation: It is defined as the methods that are applied to maintain a sanitary environment that enables people to live in it. It also promotes water, nutrients, and reuse of energy, as the shortage of these depletable resources is raising costs (Lüthi, Panesar, Schütze, Norström, McConville, Parkinson, Saywell & Ingle, 2011:11). In this study, sustainable sanitation is the municipality’ ability to cover costs and maintain sewage systems in a manner that will not endanger the society as well as the environment.

Population: It is demarcated as the whole sum of people or inhabitants within the area to be chosen for study and from whom conclusions are drawn from their inputs (Bhandari, 2020). In this study, the population refers to the inhabitants of a particular place.

1.6 Research design and methodology

1.6.1 Research design

The research design refers to the approach which moves from the original philosophical expectations to specify the selection of a selected population, as well as the techniques to be used for gathering data and for doing the analysis. The research design’s choice is based on the researcher’s expectations, research skills and research practices. It influences the way one collects data. This study used a mixed-methods research strategy for collecting, processing, and analysing empirical data. The qualitative strategy was used, and the research also used the structured interview guide, books review, journals, periodicals, government legislation and publications. On the use of the quantitative strategy, data was gathered on the structured interview guide on tables to determine the levels, quality of sanitation and water supplied in the urban dwellings and rural dwellings.

1.6.2 Sampling

Sampling is regarded as the procedure that is utilised to choose a segment of the populace for the phenomenon studied. Qualitative research is centred on non-

probability random sample and purposive sampling rather than on the probability or random sampling approaches. In purposive sampling, the selected contributors are chosen due to some distinguishing feature that makes them the possessors of the data that is needed for the study. The study used probability simple random sampling from the drawn sampling frame. Bryman (2012:187) regards this sampling frame “as the list of all the units in the target population.”

The sampled population is composed of five community members who were interviewed to the saturation point. There were five community formations, elders, youth and ten political formations on the ground. The intention was to give everyone a chance if selected to participate in the study and to provide their opinion on the phenomenon that is being studied. Considering the lack of time and resources, the study chose a willing fraction to participate in the study (Abdulai & Owusu-Ansah, 2014:11). This is supported by Saunders, Lewis and Thornhill (2012) when they state that, researchers need to draw a portion of respondents, called a sample amongst the from the aimed population.

Secondly, the study applied the purposive sampling method on the sampled or selected population. The motive for selecting this approach was to address the study related problem in finding the reasons that brought the tests of water and sanitation within the municipality. There was also a need to; assess the level of policy compliance in the supply of water and sanitation, test the level of infrastructural investment and the role of the water agencies. There was also planning, and the testing quality satisfaction of the services provided to communities. There were also tests on the adherence to budgeting, the nature and character of the staff compliment as well as capacity building. The community helped to evaluate the level of communication between the societies and the municipality on the available programmes. Furthermore, the study considered gender and age since the response of each gives a unique perspective based on life knowledge and proficiency of every respondent.

1.6.3 Data collection, methods, and techniques

Data gathering is a tool that is intended to allow the investigator to gather complete and appropriate information to be utilised in data analysing as well as donates to knowledge production (Moyo, 2017:286; Parveen & Showkat, 2017:3).

This study used semi-structured or interview guides for the qualitative research method to be applied in the primary data collection. Questions were not asked chronologically as they appeared on the interview guide. They were asked randomly based on what the respondents said on the previous question. This made the respondents to have a logical flow of information dissemination and it felt more comfortable when giving out the information that is known to address the phenomenon to a saturation point.

Secondary data was used to substantiate what has been said by the respondents and it helped to justify the information that was discovered by the studies done in other areas. The sources that were used included but were not limited to newspapers, journals, books, and internet sources.

1.6.4 Data analysis

Study used thematic content analysis using Nvivo software package as well as Microsoft excel when interrogating the empirical information in qualitative analysis. The important aspect to consider in the analysis is the 'theme by theme and not the respondent after respondent'. This follows data that is transcribed from the audio text, the conceptualised themes from the theory as well as the literature review. There is also the fragmented data which was put into themes from the literature review; the conceptualised themes from the empirically driven information and the fragment data which was put into the themes that were derived from the conceptualised information (Wotela, 2017:52). The numerical aspect of the data analysis analysed the quality of the required water to be supplied to the civilians and what sanitation requires to run waterborne systems effectively as well as the amount of effluent that was released to the environment.

1.6.5 Reliability, validity, and objectivity

Bryman (2012) as cited in Wotela (2017:237) describes reliability and validity as the procedural and punitive standards meant to ensure that research report emanate from a laborious process with integrity of extreme quality and finds broad application' of the findings and the conclusions. Sileyew (2019:9) defines validity in research as the amount to which the research findings correctly reflect the occurrences under study.

Validity of research determines, if the measurement gathers the information needed to solve the study question (Dennis, Carspecken & Carspecken, 2013:6; Somekh & Lewin, 2012:221). In simple terms, validity implies the study should quantify that which it expects to evaluate (Willson-Kristen, 2012:5).

This study used a structured interview schedule and the Statistics SA figures for triangulating the results to ensure that they are valid. This helped to gather adequate information about the factors affecting service delivery in providing sustainable sanitation as well as clean water to the people of Capricorn District Municipal area. Besides, the investigator compared the conclusions with the reviewed literature. Triangulation refers to the utilisation of diverse perspectives to scrutinise one's position (Terre Blanche, Durrheim & Painter, 2006:380).

Reliability takes effect when the same outcomes or results are obtained if the research process is redone (Willson-Kristen, 2012:5). The researcher guaranteed reliability by ensuring that interview schedule is cogent to the acceptable sample of 30 – 40 respondents so that it will be easy for the respondents to understand the questions and give perspectives on their service delivery challenges from the municipality. The researcher further ensured that the appropriate themes are captured as it is a vital feature of qualitative study. Nvivo version 12 pro computer software package was also used.

Objectively, the sampled population size was not insufficient as it would have made it difficult to achieve data saturation or information redundancy. The 30 – 40 samples made it possible to undertake a proper case-oriented analysis. These sentiments are agreed to by Bryman (2012:425) as well as Hsieh and Shannon (2005) as cited in Wotela (2017:236), who indicate that the key in qualitative analysis in the interrogation of empirical information is the theme-by-theme and not the respondent after respondent.

1.6.6 Bias

Smith and Noble (2014:2) define bias as being based in the Oxford Dictionary that it is: a preconception in contradiction of one person or group, particularly in a way well-thought-out to be unfair; an attentiveness on an attention in one part or subject. The writers further described bias as an organised distortion, the misinterpretation of data

and results to suit a particular narrative as desired and preferred by the researcher on a particular phenomenon.

Bias might occur on various levels of the research process ranging from misrepresenting the participants selection, ballooning the sample size to be bigger while in essence it was too small to gather better conclusions from what was really achieved during the data analysis (Šimundić, 2013:12).

This study fully guarded against all the biases as stated above, by ensuring that if not enough data was gathered from the identified random selection to draw accurate conclusions, then further data was collected. The analysis was on what was accurately gathered from the research population and the developed themes.

1.7 Ethical considerations

The study sought ethical clearance from the University of Limpopo (TREC) before the collection of the data. Permission was also sought from the Capricorn District Municipality because the research involved interaction with some officials, some politicians, and the members of the general community as they were the population of the study. There were contacts that included in-depth interviews, surveys and observing the people's behaviour.

The researcher further treated the respondents with respect and dignity. Surety was provided by communicating the intentions of the research as well as the safety of the participants' identities. There was no coercion to have anyone give information if they were not free to do so. The information acquired was confidentially kept and it was exclusively utilised for the research study.

The scholar ensured that questions asked while conducting interviews were not contemptuous nor awkward. The information acquired was analysed relatively and truthfully to avoid biases. This implies that an accurate account of the findings was documented. The researcher avoided the fabrication of the findings to suit their expectations.

1.8 Significance of the proposed research

This study will benefit different sectors both in practice and in academia, as reflected below:

This research seeks to impact on government legislations, strategies, and plans on poverty alleviation. Lessons shall be drawn from this study on formulating the strategies in dealing with the challenges on the supply of clean water, sanitation, and poverty. The study also pursues to provide more insights to the body of knowledge in (P)ublic (A)dministration (*locus*) or discipline and develop a structure as well as the guideline for supplying clean water and sanitation. The concluding article on this report will be availed to the university library and any interested institutions that requires access to it, and this will open further opportunities for conducting research out of the discoveries of this study.

The study will be beneficial in its contribution to the public administration practitioners (*focus*) and those who study public administration as a subject (*focus*). The data gathered from the literature and the conclusions will transform the outlook of most experts including planners, the engineers, the policymakers, environmental practitioners to look into the different sanitation practices stop considering wastewater-based sanitation as the only method.

The study will promote intergovernmental design and planning because it intersects the various fields of governmental service delivery points that are mostly delivered at the Municipal level.

1.9 Outline of the study

Chapter 1

The study outlines the research background by explaining the service delivery challenges in the provision of sustainable sanitation and clean water in the Capricorn District Municipality, of the Limpopo Province, in South Africa. The research investigated the factors that inhibit service delivery in relation to the research topic.

Chapter 2

The chapter outlines the various concepts that are regarded in this research as the contributing issues that influence the provision of clean water and sustainable

sanitation through the theoretical framework and the interrogation of literature. The chapter further outlines the adopted theories which are important in helping to find the solutions to the research questions and the research objectives.

Chapter 3

The chapter outlines the empirical literature review where various sources of literature such as books, journals, periodicals, and online sources were considered to address the research questions and the research problems that lead to the findings of the research and finally draw a comparison to the conclusions.

Chapter 4

The chapter outlines the research methodology, the research methods, the research design, the sampling techniques, the population, sampling, the ethical issues related to sampling, data collection methods, and data analysis. This chapter helped the research to find out the problems and the issues that are inhibiting the provision of clean water and sustainable sanitation. In so doing, the researcher opted for the purposive sampling method to give answers to the questions that were raised in the research, as well as answer the research questions, and draw recommendations.

Chapter 5

The chapter emanates from Chapter 4 as it gave an analysis to the answers from the research sample. The chapter is also derived from the research results, and it tests the fulfilment of the research objectives from the theories, the literature review, and the conducted interviews.

Chapter 6

The chapter gives the overall recommendations and the conclusions that were drawn from the research findings as interpreted and analysed are to give the recommendations that will be used in both the theory (*locus*) and practice (*focus*) of Public Administration (PA and pa).

Chapter 7

The chapter provides the overall summary of the study and the concluding remarks.

CHAPTER 2: THEORETICAL LITERATURE

2.1 Introduction and background

The theoretical literature as it is epistemologically called by some scholars is explained by Grant and Osanloo (2014), as a means that is applied to provide the structure where a researcher embarked on in the study 'philosophically, epistemologically, methodologically and analytically'. Green (2014:34), states that the theoretical framework "helps give direction to the study". Thus, the theoretical framework backs the research in positioning and contextualizing the formal theories into the study and provide guidance for achieving the scholarly and academic outcomes or findings. The theoretical literature further assists as the focal point for the research as it is interconnected to the phenomenon. It also helps the study to choose a relevant research design, the data analysis plan; an appropriate research approach, the appropriate analysing tools as well as procedures for the phenomenon being studied. The framework also helps in making the findings of the research inquiry more meaningful and easier to generalise (Mensah, Agyemang, Acquah, Babah, & Dontoh. 2020:53).

2.2 Defining the theoretical framework in the study

Grant and Osanloo (2014) explain the theoretical framework as "the 'blueprint' or the guide for a research based on an existing theory". It is further defined as a pattern that is often 'borrowed' by the scholar to build the study inquiry and provides the basis on which the research is constructed. Thus, the theoretical framework directs the scholar not to depart from the limits of the established theories to get the ultimate outcomes that will contribute to the *focus and locus* of the phenomenon. Brondizio, Leemans, and Solecki (2014) define the theoretical framework as the characteristics of individual effort that are useful to the study of events through the academic philosophies, concepts, and through the tenants of a belief.

2.3 Characteristics of the theoretical literature in the study

In adopting the existing theories which have been validated and tested by other scholars, the theoretical framework assisted in providing the general as well as the wider theories wherein the research is located, and where it belongs. It provides a model that brings forth the previous studies as well as the understandings that were

brought forth by the experts as well as the practitioners and the outcomes of their investigations. Those results made the study to be well developed, be appropriately designed, and accepted. Furthermore, the study acquired a starting position for advancing the unknown phenomenon from a certain subject of investigation. Furthermore, the framework comprises the theories correlated with deduced proposals while on the other side it is utilised to examine assumptions, foresee, and monitor the circumstances within the framework of a study investigation (Kivunja, 2018: 46; Swanson, 2013: 122).

2.4 Theoretical literature

The applied theories in this study support the research's aims, as well as the objectives, and they illustrate the importance of providing the communities with clean water and sanitation to restore hygiene. The also helped in addressing poverty alleviation, improving dignity, as well as equality and contributing to sustainable economic growth and in the production of food security. The theories further helped the political and administrative leaders to understand the different community principles, procedures, systems, norms, human relations as well as the practices of public relations.

2.4.1 Theory of rising expectation

According to Natarajan (2011:88), the theory of rising expectations states that the human beings yearn for more than they have and yet they are never satisfied. Consequently, a solution that is applied in one place cannot ultimately solve the problems in another place unless the core or the causes of the problems are the same. Balkason (2014:20) further states that social development is characterised by raising expectations which is a driving force for development.

2.4.1.1 The theory of rising expectation

This study derives its application to the populace from the laws of development which state that increasing expectations are the propellants of social development (Balkaran, 2014:20). The former president, Jacob Zuma indicated that, 'once the administration embarks on delivering services to the society, high expectations amongst the people starts to emerge, and once there is slow delivery, frustration starts to surface' (Van Wyk, 2015). In 2005, the predecessor of Jacob Zuma, Thabo Mbeki once sited in parliament that, in future the inadequate supply of services will

impact negatively on the stability of South Africa' (Akinboade, Mokwena & Kinck, 2013:459). Looking at the two assumptions, it is imperative to analyse the existing gap between “*expectation and reality*” as those who are in need think they are being ignored. Some people believe that the municipality is ignoring their human rights to water as recognised by the South African Constitution (Molefe, 2014:27; Balkan, 2014:21).

The theory indicates that the problems that are encountered by the municipalities should be solved amicably with the citizens instead of the people waiting for a complete system failure of ageing infrastructure. Thus, there is a need for curative rather than reactionary support that is characterised by protests (Muller, 2014:30). Luvoyo and Mokwena (2019:262) indicate that the lack of theories that guide most African public service organisations emanate from the damage control that is done after the wasteful consumption of public resources and when the communities start to protest. This phenomenon opened room for the “practice of grand and petty corruption by trusted public officials, resulting in failures of services delivery and maladministration” (Luvoyo and Mokwena, 2019:262). In this study, the citizens have expected a ‘better life for all’ and want to receive clean accessible water and sanitation in the areas that they live in. The people also expect to have effluent which does not contaminate the environment, and they also expect to have an improved and efficiently run wastewater treatment works that cope with the high inflow. There are also expectations of having an improved reticulation network of the bulk infrastructure which is properly maintained.

2.4.1.2 Consultation and the theory of rising expectation

Emanating from the theory of rising expectation, there is a dire need for the municipalities to genuinely consult with the citizens on matters that affect them within the governance structures. Such consultation must be genuinely done during the integrated development plans consultations so that the local municipality can prioritise the most significant requirements within the confines of the available resources at the local sphere. The local sphere of government should bargain the most cost-efficient ways of delivering essential services so that resources can be spent on solving the problems in the local areas (Molale, 2019:61). This will ensure that entrusted finances to local government provide both basic services as required

by the civilians such as safe water, and contemporary sanitation, proper prioritisation will be considered as per the local needs (Akinbode, Mokwena & Kinfack, 2013:460).

The consultations should include other spheres of government so that there can be a proper allocation of resources towards a particular objective, and this will avoid duplicate planning by the government spheres because the services to be delivered by government requires more capital more especially with the focus on sewer plants networks and reticulation of water provision schemes (Akinbode, Mokwena & Kinfack, 2013:460). Most of the time, the government departments send officials who cannot take decisions at the Integrated development plans (IDP) meetings, and they are just a token of presence (Manzini, 2016:32). In trying to avoid this, the district development model is currently a new phenomenon which is being preached by the incumbent President Cyril Ramaphosa and the government as a new philosophy (The Presidency, 2022).

During the consultations, it is imperative that the people's needs are taken into consideration. Care must be taken that the public administration is dynamic and everchanging, thereby meaning that what is a priority today might not be a priority tomorrow (Igbokwe-Ibeto, 2019:4). When the people did not have water and sanitation at all, the Reconstruction and Development program (RDP) level was sufficient but as time went by, the people wanted the yards connection.

Theory of rising expectation has a damaging challenge in that most of the time the concentration is on delivering water and services (operation) to the new establishments and extensions while allocating less budgetary resources to infrastructural maintenance budgeting. The lack thereof results in the collapse of the entire system as more water is lost. The wastewater treatment plants are not coping with the effluent, and this ultimately contaminates the rivers and the natural resources (Human Rights Commission, 2014).

Zooming into the theory of rising expectation and the culture, which is supposed to be adopted by the governments, a deontological approach needs to be considered because most African traditions and beliefs do not permit illicit behaviors to take place within the governance structures. The deontological approach implies that the administrative practice in the achieving people's expectations in a particular country may be derived or may be grounded on the philosophy and the religious beliefs of

the incumbents by both the administrative and political leaders who are supposed to serve and govern the public in line with the good norms and values of the society (Lovuno & Mokwena, 2019:264). In trying to achieve the public goods originating from the theory of rising expectation, consultation will smoothly lead to a philosophy known as servant leadership where the leader will be taking the mandate from the people. Thus, there will be a bottom-up approach towards problem solving than a top-down approach.

2.4.2 *Philosophy of servant leadership*

The servant leadership philosophy is traced back and it originated from the *Jewish Rabi*, commonly known as Jesus Christ of Nazareth when he explained the *dyadic* relationship and the ideal leadership model that needs to be adopted by the people as followers of their chiefs and kings during their days (Asamoah, 2018:83). When addressing the matter, Jesus indicated that the kings are regarded as great men or leaders, but they manipulate and oppress the people they rule, while they are regarded as friends of the public (Asamoah, 2018:83).

In summarising his exposition, he meant that ideal leadership is about servant hood. Philosophically, the genuine leaders are those who serve (Asamoah, 2018:83).

The application of the philosophy is still relevant today because most of the local government leaders in both political and administrative capacities deceive the people who entrusted them with the political or administrative office by doing favors for their preferred candidates through the siphoning jobs, providing services, and leaking information to their own benefit despite having signed an oath of secrecy. This philosophy also highlights that there is no commonly agreed meaning of leadership (Asamoah, 2018:84).

Daft and Marcic (2011:395) as cited in Heyns, McCallaghan and Newton (2020:2) state that the concept of leadership has evolved to suit the modern-day society. The authors state that in the past, leadership focussed on the person's intelligence, energy, and appearance. The 21st century swung the governance actions that are suitable to the governmental status quo thereby moving away from the transactional approach to the charismatic as well as the transformational leadership behaviours that combine values instead of behaviour. Furthermore, servant leadership requires

that the leaders should assert the significant settlement of morals, principles, and philosophies in management as the ethics become the fundamental basics of the practice and, they instil appropriate behaviour in the followers who are supposed to implement the projects.

According to Monroe (2014), the internationally acclaimed leadership consultant indicated that a good leader should have the capacity to influence, and they must have the ability to change the people's attitudes and behavior. They must also be able to inspire people and must not manipulate them or oppress them. There is a need for them to be passionate about the vision of the organisations and the individuals they lead. Furthermore, the servant leaders should possess a unique belief system, as well as morals, integrity and display standards that positively impact their opinions, behavior, as well as lifestyle. Sharma and Jain (2013:310) further emphasise that the leader must be able to direct an organisation in a cohesive and coherent manner so that everyone should achieve a common goal within the institution.

Heyns, McCallaghan and Newton (2020:3), agree with the sentiments by Monroe (2014) when indicating that a servant leader rules, survives, and leads by conscience, they must be honest in the ethical intelligence of whatever is accurate and whatever is incorrect so that morality together with encouragement can be provided in a manner that helps the subordinates to improve their capacity to contribute productively in their execution of duties". This will help to develop satisfaction and it will feel like they are contributing positively to the organisational success. The servant leader 's role is to make people accomplish their goals and ensure that people's needs are achieved while helping them to work towards achieving their vision. The impulse of a leader subscribing to servant leadership is, 'to provide information liberally and easily to workers so that the working environment and climate can be enjoyable centered on non-exclusion and partnership in boosting staff morale in the workplace (Heyns, McCallaghan and Newton. 2020:3).

Care should be taken that, during Jesus' teachings of servant leadership, there was no *systematic scientific mode of enquiry*, but the teachings were more on intuition

and observation. The origin of the servant leadership concept is dated to 1970 by Greenleaf in an essay titled 'The servant as a leader'. The leadership type under scientific enquiry is placed under the democratic participatory style. The philosophy emphasises that the servant leader should be a pioneer of the institution they lead by ensuring that the people being served receive the services they deserve, experience growth and development as individuals, as well as become healthier, wiser and achieve greater heights accompanied by qualitative character (Asamoah, 2018:88; Locke, 2019:34).

According to the study conducted by Nwanko, Ocheni and Atakpa (2012:119 -130), the failure of an organisation is mostly determined by the vision, the mission and the quality of the leadership that is adopted by both a person and the body of persons. The sentiments were supported by De Waal and Sivro (2012:174) who indicate that servant leadership is shown by the interpersonal acceptance of stewardship that provides direction through the 'expression of humility and authenticity'.

Furthermore, given the toxic working conditions in most environments within the parastatals, the government institutions and the municipalities, the media is always exposing negative mis-happenings which is accelerated by the operational and human resources challenges on resources maintenance, employees or human resources behavior, morale, and leadership problems (Heyns, McCallaghan & Newton, 2020:2).

Given the political landscape that South Africa finds itself in, there is a dire need to implement the servant leadership as characterised by genuineness, humbleness, reliability, taking note, empathy, answerability, audacity, and self-sacrifice (Coetzer, Bussin & Geldenhuys, 2017:19).

Kgatle (2018:8) and Coetzer et al. (2017:19), further emphasise that servant leadership is also identified as an important role player in terms of creating positive employee attitudes and improved organisational performance. Furthermore, servant leadership can provide a solution to improve governance, trustworthiness, and accountability within the South African environment.

2.4.2.1 *Malawi 's adoption of the servant leadership theory*

Malawi is a country which was dominated by electoral corruption and the ministers did as they wanted in the ministries they were heading. The coming in of President Chakwera witnessed the dissolution of the cabinet and some leaders were arrested for corruption. The cabinet was reconstituted with new principles of the servant leadership theory (The East African News, 2022). Looking at the scourge of illicit activities in South Africa, there is a need to adopt such principles to improve service delivery within the municipalities.

President Lazarus Chakwera of Malawi clearly pronounced that his reconstructed cabinet would adopt the servant leadership theory with the intention of avoiding the repeat of corruption, which was rampant in the country, seeing three defunct ministers facing charges on graft allegations as he promised to end the corrupt practices which were almost out of control and were stifling the economy (The East African News, 2022).

Post reshuffling and constituting the new cabinet, President Chakwera indicated that his government will adopt the philosophy of servant leadership to protect the public goods with a hard-working cabinet that will put in extra effort in the job they are given (Chakwera, 2021:23). He further indicated that the cabinet should work hard together as there is more work than the hands do to promote the lives of the Malawians. Within the confines of this theory, the ministers should carry out the vision of the government as spelt out in Malawi 2063 (Chakwera, 2021:3) and they must work together as the problems are tri sectoral. The cabinet members should find courage to always confront and deal with the obstacles and they must avoid delays, but they must find solutions as well as confront corruption and the sabotaging of the agenda (Chakwera, 2021:10).

The president called for his cabinet to work *humbly*, meaning that they should serve and not rule. He emphasised that the people of Malawi are the bosses and not the subjects and the cabinet members are not allowed to look down on them. The president emphasised that when executing their duties, the cabinet ministers should follow the law, 'if they do not follow the law then the law will follow them' (Chakwera, 2022:7). A call was also made to have the cabinet working *audibly*, thereby implying

that the people should hear from the ministers about the government programs, thus, the people should always be informed, as the people who are supposed to work quietly are the bureaucrats.

The Malawi president further emphasised that the politicians should listen more than they speak, thereby focusing on improving the public service benefits, and they must be accessible to the people they serve and use power to improve the plight of the people rather than to enrich themselves. He started the slogan, “corruption is our biggest enemy and is not welcome here” (Chakwera, 2022:2). Furthermore, corruption is not an opportunity, or an inconvenience, or a nuisance, but it is our biggest enemy, as it is an adversary whose intention is to harm us and destroy us, an adversary we loathe, hate, and despise (Chakwera, 2022:4). Looking at the philosophy of servant leadership, the public choice theory will be easily avoided.

2.5 Public choice theory

According to the study done by Boyne (1997:57) in Mccarthy (2020.3), the public choice theory has its origin in two conventions regarding the local sphere of government: firstly, the choice is the self – interest axiom implying that if left to their own strategies, “the policy makers will pursue their private interests rather than the public’s interests”. The second choice is that the politicians and bureaucrat’s interests can be conveyed to look like the public interest if they are hindered by the pressure of competition. The public choice theory looks at the local sphere of government as an activity in which there are consumers and sellers in the marketplace for local services. The consumers are the families who choose to locate in specific areas and pay for their choices through local taxes. “The sellers are the politicians and the bureaucrats who either produce or directly provide services for the public”.

According to public choice theory, the political procedures have a significant effect in determining the societal strategy. Thus, in a democratic political party system, the politicians play a critical role in policy formulation with more focus on gaining votes. The politicians are not always intending to be in power for the sake of executing some developmental predetermined policies, instead they promulgate legislations or enact by – laws that will ensure their future term in controlling the resources because

of being re-elected. Some are also determined by illogical ideological preoccupations of losing power as that will erode them from controlling the resources. In relation to this theory, people put their voting weight behind the candidate or political party which has the prospects of ensuring that they will access more resources for their personal gain. In other words, when for elections draws near, economic conditions play a significant role in determining who will be voted for. At that time, the strategies on the provision of distributing welfare is an important aspect of attracting widespread support for political role players according to this theory (McCarthy, 2020:3).

The theory as developed in the 1950's and in the 1960's, left political agents, voters, bureaucrats, and politicians to act in their interest (Kirzner, 1984; Ikeda, 1997). Furthermore, "the theory predicts "that small, well organised special interest groups will exert a disproportionate influence on policymaking, and the political processes end up with self-interested actors who use public power to further private ends and destabilise the service delivery processes". Consequently, the general interest of the public is compromised in favor of the interest of the group's needs (Blumm, 1994:417).

In that context, the political ideologies manipulate the morality discourse to execute the welfare policies for certain groups. For example, to strengthen some politicians or political party image, the political party might display itself as a promoter of social assistance to some people or groups of people in the country or within some municipalities (Sener, 2016).

The theory further propagates for the citizens' involvement in decision-making for the purpose of prioritising the services that are required in their area, rather than making the local government a place of competing groups who are fighting for power and resources for personal gain or political godfatherism (Seemela & Mkhonto, 2007:204; Ngwakwe, 2012:314; Manyaka, 2014:136).

This study purport, theory as meaning a group of politically connected people in possession of the privileged information on the services to be rendered will influence the proceedings of governance by appointing small companies which do not have

the capacity to do the work (fronting and corruption). For example, as it was revealed by the Auditor General's report regarding the state of the local government, "increasingly, additional municipalities are increasingly awarding projects to companies in which their politicians such as mayors, councillors, as well as office bearers, friends and families have shares not declared (Mbanjwa, 2015; Whittles, 2017).

This led to some political interferences in administration (political administration dichotomy) as there is political control over the appointments of the supply chain management in particular and this makes it difficult for some officials to execute their duties as some regional African National Congress (ANC) secretaries run municipalities, and they consider it their responsibility to appoint staff and the bidders for the tenders (Tshishonga, 2015:70; Olver, 2018:7).

These situations which are the focus of the study lead to the agency theory which determines the correlation amongst the agent and the principal, where the agent performs some functions on behalf of the principal.

2.5 Agency theory

Fayezi, O'Loughlin and Zutsh (2012:567) indicate in their study that, the agency theory has gained its momentum from amongst others a lengthy and mixed history ranging "from property-rights theories, organisation economics, contract law as well as political philosophy", and has it has been connected traditionally with the work of Locke and Hobbes, with its official acknowledgement as a formal theory dated to the early 1970s, and is the work of Ross (1973) and Mitnick (1973). The agency theory remained transversely and generally used in a diversity of disciplines, "Agency theory is appropriate in the circumstances wherein one party (the principal) delegates authority – in terms of control and decision-making about certain tasks – to another party (the agent)" (Fayezi, O'Loughlin Zutsh, 2012: 556).

2.5.1 History of the agency theory

The modern form of the agency theory chiefly emanates from the work of Mitnick (1973) and Ross (1973) and covers the areas of economics and political science which widen its usage past the simple agreement relations. Following Mitnick's

(1973) and Ross's (1973) definitions, the agency theory was consequently adapted and used in different disciplines such as sociology (by Shapiro, 1987), management (by Eisenhardt, 1989), in duties that encompasses the theory of the firm (Jensen & Meckling, 1976; Fayezi, O'Loughlin & Zutsh, 2012:557).

The agency theory has further seen its existence in other disciplines with academic history in fields such as "accounting (Ronen & Balachandran, 1995; Watts & Zimmerman, 1983) finance (Fama, 1980; Fama & Jensen, 1983; Jensen, 1986), economics (Jensen & Meckling, 1976; Ross, 1973; Spence & Zeckhauser, 1971), political science (Hammond & Knott, 1996; Weingast & Moran, 1983), sociology (Adams, 1996; Kiser & Tong, 1992), organisational behaviour (Kosnik & Bittenhausen, 1992) and marketing (Bergen, Dutta, & Walker, 1992; Logan, 2000; Tate et al., 2010). The extensive presence of the agency problem in numerous types of organisations created this theory to be one of the utmost significant theories in the finance and economic writings. Bergen et al. (1992) as cited in Panda and Leepsa (2017:17), state that within the context of the agency theory, there exists a prospect for the agent to the mutually waver mechanism and distort its capacities.

In simpler terms, the action models hidden prepare and concentrate on the layout of the agreement, that will be utilised to alleviate the moral vulnerability and encourage the agent appropriately act. Furthermore, the principals are believed not to possess any risk while the agents are naturally risk-hesitant due to the assumption that it is a mistake because of the underlying variations in the risk estimate approaches (Fayezi, O'Loughlin & Zutsh, 2012: 558).

The agency theory maintains that the two-sided relations between the principals and the agents are driven by their agreement on the most economical agreement supporting both parties concern as each one look toward data irregularity towards the other. Secondly, the theory under discussion accepts that each commercial association is motivated by each character's aim for profits and resourcefulness. It is therefore important to note that, the structures that supports the successful management of monitoring and adequate enticements requires to be transparent (Parker, Dressel, Chevers & Zeppetella, 2018:5).

Eisenhardt (1989) as cited in Panda and Leepsa (2017:79) established the remedies of the agency problem and projected them as an appropriate governance structure which can lower the agency dispute. He proposed two frameworks being to reduce the agency problem, starting with the outcome-based contract, that permits monitoring action of the agents' and encourage that the principal formulate a strong information hierarchy, where the principal takes note and is conscious of all the data about the agents' deeds, and they should not distort information to the principals. This is so because the theory undertakes that commissioning can eradicate the agency dilemma, while in the practical sense it deals with many impediments such as data irregularity, low consistency, deception, and operational expenses. In some instances, it is expected that the agency theory becomes certain that the agents might utilise the property of the organisation for their own benefits, consequently, this develops battle amongst the principals and the agents (Panda & Leepsa, 2017:77).

2.5.2 *The agency theory and municipal governance*

In further understanding the relations of the governance partners in municipal governance, agency theory is applied where the electorates are the principals in this relationship. The second role player is the political leadership comprising of the mayor and the council members whose role is to oversee the administration of municipal affairs for taking decisions with the administrative management comprising of the municipal manager and the senior executives reporting to the municipal manager who is answerable for the delivery of service as well as the daily running of administration. Their basic position in the theory collectively constitutes the agent. The Auditor General of South Africa acts as an agent for the principal who is the electorate or the local community to oversee the political and administrative leadership (Wessels, Kwaza & Ijeoma, 2021:268).

Looking at the way most audit outcomes are not positive amongst the South African municipalities on a repeated basis, it shows there is a serious discrepancy between the behavior of the agent and the values of the local community as tested by the audit outcomes.

This theory leads to the stewardship theory which is more focused on ensuring that the deficiencies are avoided, and the procedures as well as the bylaws are followed

in achieving the organisational goals. There is also the emphasis on collaboration and trust as bestowed by the public choice theory on the alignment of the goals. Thus, the municipal leaders have an obligation to ensure that the municipal operations are in line with the policies and the goals of the principal, which is the council. The evident continuous failure by the local government in failing to achieve the objective policies set by the government which is the real principal by the municipal administration demonstrates that the theory spells out the leadership's instability, incapacity, and incapability by both role players (Wessels, Kwaza & Ijeoma, 2021:272).

2.5.3 Application and Configuration of Theoretical Frameworks

Sebake (2022: 71) states that multiple application of theories might be applied explicitly and relevantly in scientific study. The argument is comprehended by Stuhr (2015) explaining how the pragmatic approach of multiplicity of theories is executed and applied practically to create philosophical interrelation. For instance, in this study the theory of rising expectation indicates that people are never satisfied with what they receive as they demand for more goods and services (Natarajan, 2011: 88). For the theory to be achieved there is a need for servant leaders, whose philosophy and theory bestow that leaders should serve the people genuinely with no elements of illicit execution of activities (Akiabonde, Mokwena & Kinfack, 2013: 459). Finding that in most municipalities leaders are betraying the electorates by acquiring information from the institutions they lead to position their preferred candidates and companies in an advantage position and judge in favour of preference not competency by leaking important information which is used to adjudicate. In some cases, they hire companies or agents who would act as an agent for the society while in essence is briefed to sway the judgement and appointment their preferred bidder. The oath of secrecy is ignored in this respect (Asamoah, 2018: 84).

The theories as outlined makes it not easy for the executors to achieve the goals of the NDP, IUUDF and the DDM as they require competency and people 's engagement on legitimate basis not as a token of participation for the sake of legislative compliance. Bauer (2014) in Sebake (2022: 71), stipulates that the application of multiple theories helps uncover the subject of research through integrated matrix. In

the context of this study the theories applied diagnosed the challenges of poor service delivery in water and sanitation within Capricorn District Municipality.

In attempting to advance provision of services within the municipalities, South Africa 's 5th and 6th administration adopted new philosophies known as the Integrated Urban Development Framework (IUDF) and the district development models that are aimed at implementing the National Development Plan.

2.6 National development plan (NDP)

In achieving the objectives of the Integrated Urban Development Framework (IUDF) and the District Development Model (DDM) originating from the national development plan which focuses on water and sanitation, care ought to be employed in ensuring that plans as outlined by the NDP are considered. For instance, in achieving the objective of the sustainable provision of clean water, the legislative command demands that water resources of the country need to be sheltered, achieved, utilised, advanced, well-looked-after, and measured in a sustainable manner for profiting all the members of the society and not harm the atmosphere. In further achieving the Department of Water Affairs' objective, there is a need to effectively implement strategies, work procedures, and strategies for both integrated planning for water resources and facilities. This requires obeying water policies, water legislation, the statutory necessities crucial to the providing the right have adequate food and water. In so doing there shall be improvement in poverty eradication and economic transformation. Furthermore, The Department of Water Affairs' strategic objectives are aimed at ensuring improved water utilisation customs by ensuring that the local sphere of government conserve water and continuously implement demand management programmes on an ongoing basis (GCIS, 2016:442).

2.7 Integrated Urban Development Framework (IUDF) and District Development Model (DDM)

The IUDF is a philosophical model that is aimed at accomplishing the complimentary ideas of the National Development Plan (NDP). It is also a national urban policy of South Africa. The DDM is a tactic accepted by the government with the aim of eradicating the individual departmental and sectoral method of government

budgeting, planning, and provide goods to the municipalities while attempting to accomplish objectives of the national development plan. The models were adopted by the cabinet in August 2019, with the intention to advance people 's livelihoods through; special transformation, building a capable, ethical development state with the aim of having greater impact, as well as improving answerability and the manner in which work is executed for improved comprehensible development deliverables (CoHgta, 2021).

In demonstrating the way, the relationship needs to be co-ordinated amongst the spheres of government. The national sphere is tasked with the responsibility of formulating policies, ensure that there is proper consecration and co-ordination of the provincial spheres and the local spheres of government. The co-ordination will ensure that municipalities as a sphere bordering the society delivers the goods and services to the people. The political breakthrough experienced and ushered by democracy in 1994, shaped a beneficial atmosphere for developing more cohesive development strategies and programmes (Ndlovu, 2016:16).

2.8 Defining the District Development Plan

As an attempt to develop and build a capable, ethical developmental state, the District Development Model (DDM) was developed as working model to be implemented and improve co-operative South African governance. "It is a method of government operating in unison focusing on the municipal district and metropolitan spaces as the impact areas of joint" (CoHgta, 2021). The model developed and produced an approach which will improve the three spheres of government developmental plans, budgeting processes, and execution of goods to all the governmental three spheres and state entities through coordination and cooperation to achieve the service delivery governmental objectives in a structured manner with improved routine and answerability for clear service delivery and development outcomes (CoHgta, 2021).

2.8.1 Objectives of the DDM

The intention of the model is to have the district and metropolitan spaces plan, budget and implement programs together simultaneously addressing the encounters of alleviating poverty, reducing unemployment, and balancing inequality. The model

is further aimed at implementing projects through a collaborative method and processes to develop single strategy for all the 44 districts and eight metropolitan municipalities while at the same time synchronising with the Integrated Development Plans (IDP's) of the municipalities (CoHgota, 2021).

2.8.2 *Implementing the DDM*

The DDM shall be realised over a concerted method to advance solo plan and synchronise it with the Integrated Development Plans (IDPs) of municipalities for all the 44 districts and eight metropolitan municipalities. According to the plan, individual municipalities both at the district level and metropolitan areas will plan with the aim of developing a long-term government agenda which will be unpacked to address the developmental issues related to handling urban development, and backup propellers of the local economy; fast-tracking release of the land for development; participating in infrastructure for cohesive human settlement, commercial movement, providing basic services; as well as addressing provision of sustainable goods and services in the sphere closest to the civilians on the government hierachy. In stressing the importance of the DDM, the President Cyril Ramaphosa in the State of the Nation Address held on the 10th of February 2022, stressed that the “*government must work for the people*”, in achieving the ethical, capable, and developmental state that delivers on its mandate (The Presidency, 2022).

2.8.3 *Alignment of DDM to IDUF philosophies*

The IUDF is a national urban policy of South Africa while the DDM is an approach that was adopted by the government to tackle the deeply non - coordinated rooted separate plans, budgets, and deliver services across the three spheres of government without involving the private sector, the non-Governmental organisations (NGOs), and the communities to achieve social cohesion. Thus, the IUDF and the DDM are critical philosophies that the fifth and the sixth administration are determined to decisively address while subscribing to the notion of social compact, a societal tactic aimed at refining peoples' lives through longitudinal renovation. In implementing the IUDF short-term priorities, a plan needs to be developed to institutionalise one long-term planning, development, and implementation of government objectives across all the three spheres of government involving the premiers and the members of the executive council (MECs). The move for serious

implementation is seen by the nomination of political district champions at a national level and it must cascade to the district level as a perfect example of how the IUDF and the DDM complement one another (CoHgta, 2021).

Currently, the IUDF has focused on the towns and the cities while the DDM takes on a district-wide approach commonly known as the regional posture. This implies that the IUDF involvements in the municipalities shall be vitally important in providing a viewpoint of the entire district with much emphasis on management of integrated sustainable human settlement, unified urban infrastructure, planning as well as efficient land governance and administration of the healthy inclusive economic growth. Furthermore, the proper implementation of DDM will seek to ease and strengthen the execution of short to long-term significances of the IUDF (The Presidency, 2022).

2.8.4 One District, One Budget, and One Plan.

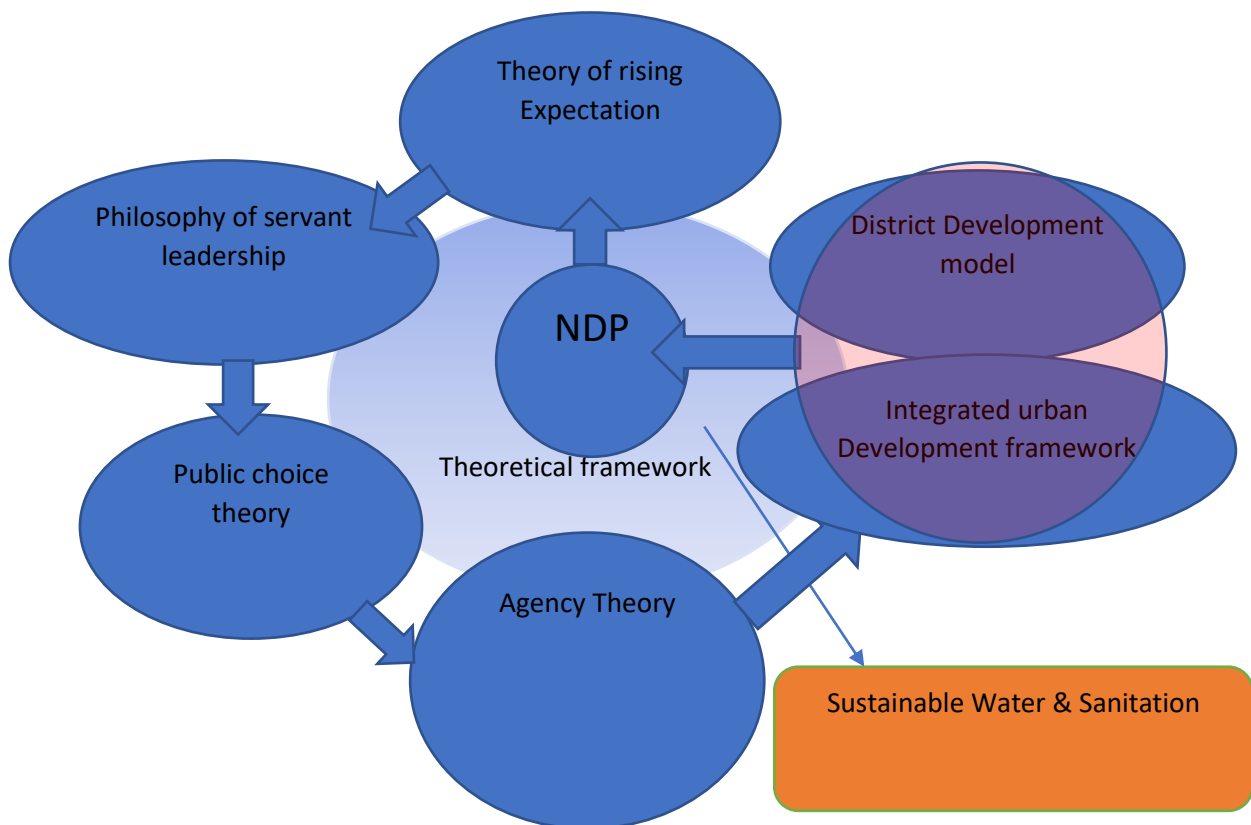
Having the district and the metropolitan spaces as areas closest to the people is vital and will improve the performance and ensure coherent service delivery. The district model's vision is articulated through the IUDF's visualisation of obtaining the urban surplus. The IUDF describes the urban surplus as, "an optimal situation where the increasing concentration of an economically active population translates into higher levels of economic activity, greater productivity and higher rates of growth" (GoHgta, 2021). In optimising the urban dividend, the government must focus on enhancing the capabilities of the people, by developing an economy that is more resilient towards job creation and it must also place convenient preference, superior communal incorporation, safety as well as access to prospects (GoHgta, 2021).

The communal subject concerning the DDM and the IUDF is the requirement to advance in people through the low-cost, as well as the localities to improve the quality of life in addressing the high levels of youth unemployment, as well as to provide social security to women and child-headed households. In the planning phases with more focus on indigents, there is a need to address the high rural - urban migration which is a cross-cutting theme in the IUDF where the urban-rural mutuality is being experienced daily. Given the analogy of the IUDF and the DDM, it is clear that the DDM did not substitute nor duplicate the activities of the IUDF instead the two are complimentary towards each other. The gap that exists and that

needs to be filled to date regarding the two concepts is to implement better communication strategies, approaches, as well as teach and mobilise the entire community to understand the two strategies and policies on their utilisation for tackling the socio-economic encounters (GoHgta, 2021).

The sentiments by President Ramaphosa concur with the philosophy of servant leadership that was adopted by the Malawian President Chakwera when reconstituting the cabinet after arresting some ministers due to corruption which was becoming synonymous with his administration.

2.9 Position of the theoretical framework



Source: Author 's own work

Figure 2.1. Position of theoretical framework.

2.9.1 Components of the theoretical framework

The theoretical framework in the study is comprised of the systems that are geared towards achieving the objective of sustainable water and sanitation as projected by the NDP's 2030 objectives. Grady (2010:7), outlined a system as "a collection of things that interact to achieve a specific purpose".

2.9.1.1 *Theory analysis towards achieving a point of sustainable development.*

Given the requirements of the theories in Chapter 2.2 and in Chapter 1.3 of the empirical literature review, it is clear that both the theories and the literature did not achieve sustainable water and sanitation as the study points out the hindrances which are experienced by the Capricorn District Municipality when applying those theories. Moving from deductive reasoning, there are missing components that need to be addressed by the researcher in the study. This will be addressed through the conceptual framework.

2.9.1.2 *Conceptual framework*

The conceptual framework is a “system of concepts, assumptions, expectations, beliefs and theories that supports and informs the researcher because it is something that is constructed by the researcher and it is not found” (Ravitch & Rigaan, 2012:8). The conceptual framework for this research addresses the service delivery challenges in the provision of sustainable sanitation and clean water in the Capricorn District Municipality. Emanating from the theoretical framework, the researcher selected specific concepts to “*form a high order unit of thought*” (Anfara & Mertz, 2014:3). A conceptual framework forms, “*an individual perspective defined not only by values and perceptions, but also by the sum of one ‘s experiences, beliefs, and knowledge from every facet of life*” (Egbert & Sanden, 2014:05). The conceptual framework developed in the study outlines the key factors or the variables together with “the presumed relationships among them” (Ravitch & Rigaan, 2012:8).

Given the analogy that the conceptual framework is an abstract idea in the study, the researcher will graphically portray the structure for an easier visualisation and understanding by the reader. The framework is developed in relation to the chosen theories in the study as presented in Section 2.2 of the study. The researcher’s presentation of the conceptual framework despite the existing theories, the government policy and the municipal bylaws is informed by a missing component which leads to the failure and the challenges of obtaining sustainable water and sanitation services within the Capricorn District Municipality.

The research contends it might remain the outcomes of inadequate service delivery management in the supply of water and sanitation by the municipality stakeholders to deliver sustainable services to the people. The approach that was followed on the

developed conceptual framework aligns with the findings by Hennick, Hutter and Bailey (2011:40) who state that the conceptual framework is developed through deductive reasoning based on existing literature and theory.

Emanating from the theoretical framework, the main concepts that were used are water and sanitation challenges, theft, ageing infrastructure, operation and maintenance, water quality, staff incompetency and the dilapidated sewage treatment infrastructure. According to the research, these variables have much influence on the sustainable provision of water and sanitation in both the rural and urban settlements of the Capricorn District Municipality. Having used the deductive reasoning from the theoretical framework, the researcher noted some missing components that need to be addressed, hence this study.

If the institution ignores these variables, the municipality will experience service delivery challenges and it will fail to achieve the sustainable water and sanitation provision in the district. The successful provision of water and sanitation services is dependent on the organisational culture, planning and budgeting processes. To achieve the main objective of providing sustainable water and sanitation, it is imperative that there be elimination of obstacles that are in the institution, in the middle of the institutions and some of the contributing stakeholders (Lawler et al., 1992).

2.10 Position of the conceptual framework

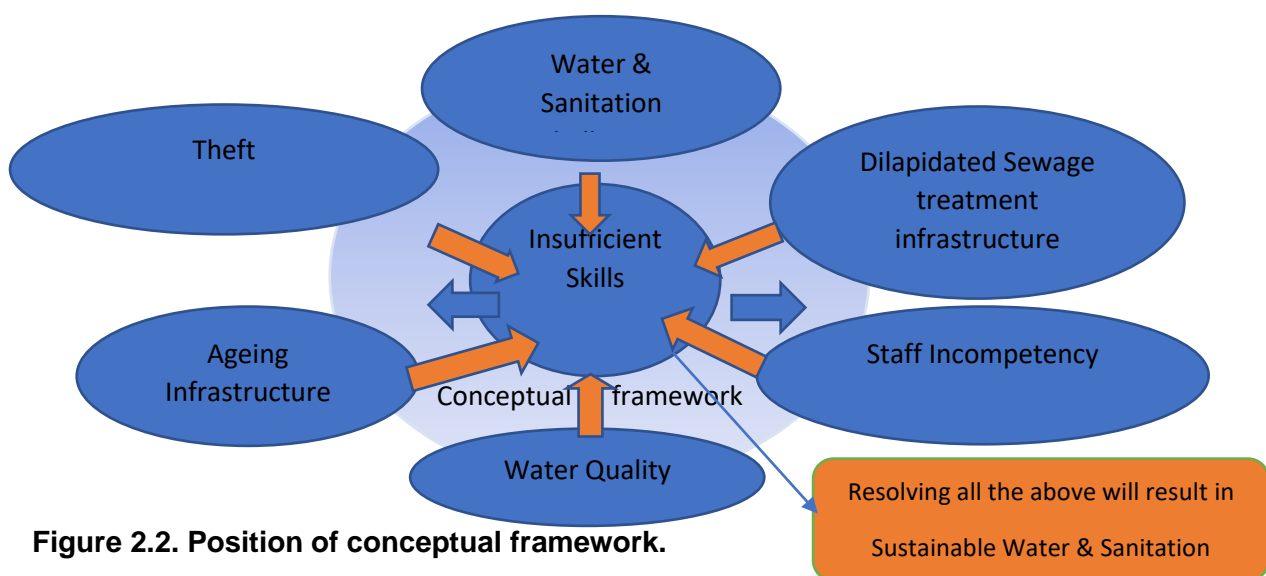


Figure 2.2. Position of conceptual framework.

Source: Author 's own work

2.11 Models in solving water and sanitation.

The modern-day experience is dependent on economic growth which is fueling rapid urbanisation and is causing the rural dwellers to request better living conditions, better services, especially on water and sanitation such as those who are in the urban area's growth centers. Looking at the community voluntarism model, it will be realised that it is no longer appropriate to adopt the blanket approach of providing the entire rural population with services that depend upon it only. It should be noted that the 'basic' community management model has achieved some success, but there is a requirement to reinforce the administration provisions for water and sanitation to discourse the wider features that allow operative supervision (IRC, 2013:2).

There is a need to recognise a new choice of the model so that service delivery can be sustainable, and it can be strengthened in any district, town and at the national level. The success will be achieved when issues such as financing, regulation and monitoring are considered. Further consideration should be on the low allocations of resources to operational expenditure, capacity building; nonappearance of appropriate administrative constructions; and poor inadequate strategizing and execution (Water Aid, ud:5; IRC, 2013:2).

2.11.1 Factors to consider in developing the management model

As indicated earlier in the study, the selection of management models does not need a cut and paste approach as the conditions differ from one place to the next even in one country. As a result, in choosing the management model, the researcher made sure that it is aligned to the national government policy as well as recognised to ensure that provided goods and amenities are all-encompassing and inexpensive to all the recipients in the societies and throughout the district municipality. This will enable the provision of the best possible outcomes in terms of service levels and the standards for consumers. It should as far as possibly consider the expansion of the project due to population growth and the self-improving demands of users (Water Aid, ud:38).

The researcher further considered that the model will ensure that it is user friendly and will require little training because it will not be realistic to expect a complex model with highly technically complex schemes to be managed by untrained

volunteers. For instance, in most parts of the world, the funding agency handed over relatively sophisticated piped schemes to poorly trained and ill-equipped community volunteers who found it difficult to cope (Water Aid, ud:38).

The sentiments were substantiated by RWSN (2009); as well as by Jha (2010) in IRC (2013:2) who indicates that, “community-centric institutional delivery models are proving to be unsustainable in the majority of cases on account of complexities in management that require professionalism and improved capacity – technical, financial, as well as managerial”.

2.12 Legislative framework

President Thabo Mbeki in his speech of the 27th of April 2006 mentioned that “the matter of service delivery is central to our freedom because we cannot enjoy this freedom while our fellow South Africans have no clean water, have no sanitation and are still using the bucket system. We cannot enjoy this freedom while many among us still have no electricity and other basic services. It is therefore important that all spheres of government combine their efforts to ensure speedy implementation of programmes around these basic services” (Mpehle, 2012: 214).

The South African government’s post 1994 policies became universally recognised and respected by many in and around the world because they were geared towards eradicating as well as addressing the anomalies of the past regime which was not universally recognised. The policies were intended at changing the people ‘s livelihoods’ in most communities who never had access to amenities such as water and sanitation. Unfortunately, implementation of service provisioning in the local spheres in the country is progressing at a “snail’s pace”, and not sufficiently evident as the implementation is very slow with minimal impact.

Mdlongwa (2014) also indicated that there is a “slow rollout of services”, and more often the slow as well as monotonous development hinders the excellence and efficacy of services to be delivered. This slow pace attracted criticism from both the international and local structures including the citizens as they live in a democratic country (Mpehle, 2012:214). The study conducted by HSRC (2016:4) discovered that the sluggish pace and inadequate value of service aggravated demonstrations in South Africa and attracted more attention at the local government levels. The

protests were characterised by high levels of violence, xenophobic attacks, as well as criminal activities that included amongst others robbery and violence.

The informal settlements and the metropolitan areas of the Western Cape and Gauteng demonstrated high dissatisfaction about service delivery. A huge gap of resources provision or service delivery was observed amongst the rural and urban areas of the former homeland areas of Limpopo, Eastern Cape, Northwest, and KwaZulu-Natal. Furthermore, dissatisfaction of resources provision is extra prevalent not only limited to the localities and divisions known as wards characterised by most unpleasant provision of goods and services as well as delivery bottlenecks (Managa, 2012 as cited in HSRC, 2016:4).

2.12.1 The provision of water services delivery is based on the following legislation

The South African legislation is viewed as the foundation stone for a reasonable and right people. It is intended at guaranteeing that all men and woman are secured the right to a safeguarded atmosphere that is not detrimental to their wellbeing and assures the non-combatants to be in proximity of natural resources such as water and appropriate sanitation (Department of Public Works, 2012).

According to the LHR Publication Series (1/2009), South Africa is considered a nation state with insufficient water sources with the slogan 'water is life, sanitation is dignity' and it is historically described to be from the imbalances of the water supply and usage. Furthermore, the responsibility to supply water and sanitation to the civilians is upon the policy makers / executive power as bestowed by the constitution and delegated to the local sphere of government as enacted by the Municipal Structures Act 117 of 1998; the Municipal Systems Act 32 of 2000, the Local Government: Municipal Finance Management Act 56 of 2003 and the Public Finance Management Act 1 of 1999.

2.12.2 The Constitution of the Republic of South Africa - Act (108 of 1996)

Section 152 (1) (b) stipulates that the local sphere of government is to ensure the delivery of essential services in a sustainable way. This is supported by Section 152(2) which requires that, local sphere or municipality should ensure that the objectives of rendered services are met through its economic and governmental capability.

In achieving all the water and sanitation aims, the municipality should comply with Section 153(a) & (b) ensure that its administration is structured in a way that the budgeting and planning processes are given priority so that there will be the advancement of communal and commercial growth together with the achievement of the society's basic needs. The Act further stresses the participation of the municipality in the national and provincial development programmes. This call is in line with the adopted philosophy of the 5th and 6th administration when calling for the district development plan.

Section 27(1) (b) of the Constitution makes an emphasis that, each person is subjected to the right of accessing sufficient nutrition and water; and inability to provide for themselves as well as their dependants calls for the relevant or appropriate societal support available to address their needs. This in turn made provision for the indigents policy and support. Furthermore, the indigent policy is intended to include those who are presently omitted from accessing basic amenities through the delivery of a societal wellbeing and help the impoverished people in the country to obtain affordable basic services that will improve their living as well as health conditions within their jurisdictions.

2.13.3 *The Water Services Act (Act 108 of 1997)*

The Act is intended to deliver the basic civil liberties and access to essential water provision, as well as basic sanitation. It provides and outlines the setting of general rules / norms and standards regarding the statutory obligation of local government as authentic sanitation and water-service providers as per the set national standards and norms. Section 4(3)(c) make conditions that establishments or authorities responsible for water provisioning should not refute individuals who cannot afford to pay for an important commodity namely water, the requirement is for the individual to proof non affordability for this basic social necessity.

2.13.4 *The National Water Act (36 of 1998)*

The National Water Act (36 of 1998) aims at overhauling and deliver essential transformation of the legislation concerning water sources while at the same time repealing some segregation laws as was enacted by the apartheid government. The law is seen as the principal lawful means concerning the water sources administration in the country (South Africa). The legislation further possesses wide-

ranging requirements that ensures safety, purpose, progress, preservation, administration, and for the management of South Africa's water reserves.

2.12.3 *The Municipal Finance Management Act (56 of 2003)*

The aim of the Municipal Finance Management Act (Act 56 of 2003) is to safeguard thorough justifiable administration of the economic matters in the local sphere and some institutes within the municipalities through modernising the budget and financial management practices as well as through placing the municipal economies on a maintainable equilibrium to amplify the capability of the local sphere to distribute amenities to all its inhabitants, customs, handlers, and stockholders optimally.

Section 21(2) (e) (ii) (aa), makes provision that on demand, any data concerning to the financial plan or budget may be made available to the departments responsible for water, sanitation by the National Treasury as subject to any shortcomings that may be approved. Furthermore, the Act requires that in terms of Section 33 (1) (ii) (cc), the local sphere of government may enter into a contract which will impose financial obligations on the municipality beyond a financial year, but if the contract imposes financial obligations on the municipality beyond the three years covered in the annual budget for that financial year, it may do so only if the contract involves the provision of water, sanitation, electricity, or any other service as may be prescribed by the responsible national department.

Section 41 (1) (a) requires that The National Treasury should provide monitoring on the estimates or prices to be paid by structures of state for the amount or quantity of electricity, water as well as any supplementary wholesale incomes that may be arranged with municipalities or their entities for the delivery of amenities; and expenditures experienced by municipalities as well as its entities for supply of bulk services. Section, 42 (1) stipulates that if a national or provincial organ of state supplying water, electricity or any other bulk resource as may be prescribed, to a municipality or municipal entity for the provision of a municipal service, intends to increase the price of such resource for the municipality or for the municipal entity, it must first submit the proposed amendment to its pricing structure.

2.12.4 *The Municipal Systems Act – (Act 32 of 2000)*

The Municipal Systems Act (Act 32 of 2000) is intended to provide for the core principles, mechanisms and processes that are necessary to enable the

municipalities to move progressively towards the social and economic emancipation. Section 74, states that the municipal council should ensure that it adopts and implements a tariff policy on the levying of fees for the municipal services provided by the municipality or by way of service delivery agreements, and which complies with any other applicable legislation.

2.12.5 Strategic Framework for Water Services (2003)

The Strategic framework for water services aims at aligning the strategies, regulation, and the policies of water facilities subdivision. It further lays out an all-inclusive tactic through admiration to the delivery of water amenities in South Africa, not excluding the insignificant communal water supply and sanitation systems in the most distant rural parts to great district arrangements delivering water and wastewater amenities to society and businesses within the focal inner cities. Policies are understood to be the documents that are establishing the planned agenda containing the strategies for the delivery of water amenities for the non-exclusion of drinkable water standard, and part played by the Department of Water Affairs (DWAF) as a subdivision controller that shapes the deviations and approaches required to accomplish the strategy objectives because of the advancement South Africa completed in launching autonomous municipalities post 1994 dispensation.

CHAPTER 3: EMPIRICAL LITERATURE REVIEW

3.1 Introduction

In South Africa, local government is a ‘highly contested terrain’ amongst the government spheres, and it does not usually hire staff that is competent enough to tackle both the administrative and the policy-making responsibilities (Mzangwa, 2017:67; Tshishonga, 2015:77). For instance, the jobs are outsourced at the Mangaung Metropolitan municipality despite having internal staffers who are hired for that function, the reason being that there are no qualified people to do the job (Makhafola, 2022:8).

Ultimately, this has a straight compoment on the delivery of continuous clean water and sustainable sanitation to the civilians. Another practical example is the Emfuleni Municipality which was declared dysfunctional with residents bearing the brunt of raw sewage, rising water rates and declining water pressure due to the reported leaks that are unattended by the municipality, and it lost water worth R500 million per year and it is still paying the R1.1 billion water bill (Mabena, 2022:3).

Furthermore, service delivery and communication remain the biggest challenges that the local government faces (Mdlongwa, 2014). These situations cause protests due to the lack of communication with communities about the government’s plans and the intended activities regarding service delivery (Olver, 2018:7; Tlhogane, 2018:71; Mzangwa, 2017:68).

For the municipalities to optimally reduce the number of protests, there should be an obligation to fast-track the delivery of basic amenities like water, sanitation, and sewerage with more focus in areas which are characterised by a high population density. Giving emphasis to water services, the greater supply should be directed to the entire communities not to the number of water accounts that are listed on the local sphere (Morudu, 2017:1).

This chapter investigates the causes of poor service delivery both politically and administratively, and it also looks at the wastewater infrastructure challenges, the budget allocations, the communication with communities, the environmental impacts

on service delivery, as well as the roles and functions of the catchment management agencies.

3.1 Causes and failures in the provision of sustainable sanitation

In most South African municipalities, the effective and competent distribution of quality basic amenities to the communities such as water, sanitation, housing, and electricity remain a huge challenge (Mdlongwa, 2014). In a study done in Lephalale, it was found that there is a lack of skilled staff “such as plumbers, engineering technicians, plant managers, artisans, water treatment specialists, engineers and assistant managers” in water and sanitation services (Mbeki & Phago 2014:212; Masindi & Dunker, 2016:32).

Mdlongwa (2014) further indicates that the staff encounters are serious through the services and the capability in the local spheres or municipalities throughout the nine provinces of South Africa as most of the people do not possess the essential methodological or technical knowledge. In the parts which they have those required skills people sometimes have a deficiency of competent workers who might be able to help the municipality in executing excellence local services to the inhabitants.

Shortage of ability contributes negatively to the community’s water and sanitation services (Masindi & Dunker, 2016:38). For the municipalities to improve the sanitation and water quality services, the first step is to improve and put the internal processes in place and the lack thereof leads to the ineffective delivery of water and sanitation (Masindi & Dunker, 2016:30; Mbeki & Phago 2014:212).

The argument was augmented by Hanyane and Nkgabe (2012:730) who state that ‘the sanitation services throughout South Africa have suffered at the hands of poor management and poor forecasting at the municipal levels’. This led to high rate of service delivery protests in certain areas which Van Rooyen (2006) in (Hanyane & Nkgabe, 2012:730) terms as ‘service delivery stricken’ areas. The need to provide development and the effective performance of the democratic political system needs to be accompanied by honest, reliable, and competent officials who understand the principles of non – partisanship in governance, and those who respect the heterogeneous values, race, gender, culture, tolerance as well as those who respect

diversity, promote social cohesion and the interests of the people (Masango & Mfene, 2017:596).

This experience is practical in some local municipalities of the Capricorn District such as Polokwane and Lepelle-Nkumpi where the WWTP are releasing effluent which negatively impacts the ecosystem such as what is happening at the Blood River. Planning and budgeting are found to be amongst the contributing factors of the poor situation. The chairperson of the Parliamentary Portfolio Committee on Water and Sanitation indicated that the Seshego WWTP “lacks skilled workers who can run the plant”, as well as do repairs and maintenance. The proof of skills shortage is seen in the district when the contractors and not the municipal staff do an analysis of the sewage requirements (Machaka & Leshiba, 2019; CDM, 2018/19:260).

To ensure the improvement of water and sanitation, the municipalities should source the services of qualified personnel and competent leadership (Manyaka, 2018:53). This leaves much to be desired as to ‘who hired who and how’. Despite this understanding, the Local Government Systems Act (Act, 32 of 2000) requires the municipalities to have a mandatory capacity of human resources that are developed and capacitated to execute municipal functions in an accountable, effective, economical, and efficient manner (Mohlala, Phago & Mpehle, 2019).

This is also emphasised by the National Treasury (2011) which calls for municipalities to invest in training which is development-oriented and effective. The study conducted in an undisclosed municipality in Limpopo by Ndebele and Lavheni (2017:352) showed that staff training is not a priority for the municipality. This shows that most municipalities do not adhere to the requirement of the Act.

In essence, this implies that for people to have proper water and sanitation service delivery, those who administer the process should not look at their gains but instead they should consider service delivery first (the public choice theory’s expectations). This was supported by the CoGHSTA Member of the Executive Committee (MEC), Makamu Basikopo when addressing the CoGHSTA ‘Sekhukhune District Municipality Roadshow in Limpopo province, saying that “the mayoral committees, the Political Management Team (PMT) and the senior management in the district

must start to facilitate appointments of young, fresh, and skilled officials in the water and sanitation department”. ‘This is the only way we will be able to deliver sustainable water services to our people’ (Mdluli, 2019:2; UN-Water, 2005 – 2015:55). From what the MEC of CoGHSTA said, the intention is to get rid of bad governance which is characterised by issues related to but not limited to illicit administration and the bad execution of duties wherein the public office is used for personal gain through utilising the country’s economy and social resources (Lučić, Radišić & Dobromirov, 2016:361).

3.2 Causes of poor service delivery

Service delivery hindrances are associated to different aspects of administration amongst which is auditing which is associated with financial controls, and political administration dichotomy which are mainly associated to corrupt activities in provision of services to be delivered in the south African democratic dispensation. There are also wastewater infrastructure challenges, ill communication with communities and the impact brought up by the environments and the human resources which is not well skilled for executing their duties (Mdlongwa, 2014).

3.1.1 Audit / financial perspective

In the instances where the reference point of service delivery is associated to the financial controls in the governing institutions, an acceptable assumption of good governance is the audit outcomes. In the *locus* and *focus* of public administration, there is a thin line that separates good governance and the audit outcomes. A good example may be attributed to the Overstrand District Municipality which received the best audit possible in the South African public administration known as ‘unqualified with no findings’ for almost three years consecutively.

Realistically, the achievement did not translate into an observed service delivery because in some cases there are observed poor deliverables proofed and accompanied by the unrelenting dissatisfied voices as well as service delivery protests which are averaged by 2.26 protests daily over the past seven years (2015 – 2021) as per the Institute for security studies, protests, and public violence monitors (Maluleke, 2021:18).

In demystifying the assumption that a clean audit results in proper service delivery, Maluleke (2021:18) who is the South African Auditor General indicated that a clean audit simply indicates a solid foundation for the services that can benefit the people and improve their human rights as well as advance the chances of improving their lives. Furthermore, a clean audit simply implies a compliance with the basic aspects of accountability and transparency. In simpler terms, this is a basis for clean administration as the books are balanced, revenue is collected for the services rendered, accounting is done for assets, and there is the prevention of unauthorized irregular or fruitless as well as wasteful expenditure.

One of the bases of the services to be delivered is for the institutional leaders to look after the public finances within their custody so that there can be sufficient resources available for the supply of goods and services to the people. A direct measure which was introduced with the intention of achieving appropriate service delivery for both water, sanitation other government related services was the introduction of Material Irregularity (MI) which is a preventative control for implementing operative consequence management in public administration as a practice and it is difficult to manipulate the controls (AGSA, 2022).

The introduction of the MI measure was to neutralise a culture which was developing into a norm for the doers of wrong actions utilising state resources while knowing very well that the Auditor General's recommendations might be ignored due to the non-powers to implement the remedial actions post the flouting of public funds, legislative requirements, and policies (Maluleke, 2021:18).

In public administration, there is a need to seriously follow the right procedures as it is a remedy for decent administration and promotion of developmental economic growth. Failure to do so leads to public distrust and the loss of confidence in the municipal administration (Templhoff, 2021:129). This is supported by the Auditor General's sentiments when stating that, "keeping tight financial controls does not by itself guarantee that funds will be channeled to supplying services required by the civilians, instead it is a right footing to meet those deliverables effectively, efficiently, transparently in a sustainable manner" (Maluleke, 2021:18).

3.1.2 Politics administration dichotomy in municipal governance

Taking voters for granted has become a norm in South Africa to an extent that, in most cases service delivery is negatively impacted because those who are prudent to use each cent / rand from the public purse had to do so diligently. Unfortunately, there has been a high leakage of information, fraud, corruption, and some inefficiencies that made public funds not to benefit the people through the procurement of services, public goods, initiatives and developing infrastructure that can support economic and social development that are rooted on clean administration (Maluleka, 2021:18; Mathiba, 2020:643).

Given the fact that the municipalities run on the taxpayers' money, the people have the right to know how the money is utilised (Tempelhoff, 2021:132). Thus, the financial challenges across the South African municipalities have led to institutional bankruptcy, or most of the municipalities are on the brink of being bankrupt. This situation affects the municipality's capability to supply excellence services to the people (Mdlongwa, 2014). One other prominent factor that make the dichotomy to be more complex is seen when there is corruption.

For instance, according to the study done at Fetakgomo Local Municipality, the study discovered unpleasant relationships amongst the politicians led by the mayors' office, administration led by the accounting officer 's office together with head of finances. The findings revealed a need for serious attention since the people in those offices were not well skilled and incapacitated to execute the tasks assigned to them (Beyers, 2016:172). There is shortage of programmes that will enhance staff skills and the administration of the municipality is weak. Furthermore, the findings revealed that the human resources capability construction was not sufficiently planned for in the municipal budgets and in some cases, it did not allocate any financial resources. The research further discovered great prevalence of abnormal or unacceptable hiring of individuals who do not possess appropriate qualifications and required abilities (Beyers, 2016:173).

The study further revealed that there is serious interference in the administrative affairs by the politicians to an extent that public participation is severely affected. The result is an administration which is characterised by *poor* public participation in

municipal planning and programmes, and it was also discovered that there is lack of honest contributions as a result of political unsteadiness as well as the consequent failure to provide democratic as well as accountable governance (Beyers, 2016:173). This matter was supported by Makhafola (2022:8) when reporting that the Free State Mangaung Metro has spent one million Rands in two months paying lawyers to translate the bylaws and the officials in the municipality indicated that, “there are challenges in the political arena which are spilling into administrative work”.

3.1.3 Corruption

One of the enemies of developmental infrastructure in South Africa is corruption which is now a scourge that manifests itself in a regressive mood to those who are for a fair, transparent, equitable and accountable system of governance (Mathiba, 2020:642). Habtemichael (2009:35) as cited in Mathiba (2020:643) supported the sentiments while indicating that, illicit action in the public arena seizes sustenance from the downtrodden, while on the other hand a conglomerate and a setup of delinquency emerges. The consequence is to put the monetary and public structures of the nation at danger. Furthermore, corruption is an inhibitor of human rights as it diverts the resources meant for the people’s infrastructure towards improving their lively hoods and human dignity to the “errant public officials” as bestowed by Camer (1997:57) as cited in Mathiba (2020:643).

According to the study by Mantzaris (2014:67), some people view corruption as the most profitable phenomenon in South Africa as it is continuously practiced in many sectors of the society and in government spheres. Once infrastructure is compromised, the realisation is the dropping of human rights to the natural environment which does not pose any danger to people ’s wellbeing (Tempelhoff, Ginster, Mahabir, Jaka, Kruger, and Nkomo. 2021: 121). In the main, the operational lapses are experienced more especially in the municipal water and sanitation sector due to the delays in adequate maintenance and in the upgrading of infrastructure despite population growth which puts more pressure on the wastewater treatment plants.

The empirical evidence derived from a study led by Tempelhoff, *et al.* (2021:129) at Emfuleni Local Municipality shows that there are some officials and politicians who

connived on the dealings with the municipality. Amongst the findings, it was noted that the local government funds were not benefitting the intended people. Funds allocated to improve the delivery of services may well not be reported what they were used for. It was found that some projects were signed off without proper planning, implementation, and without the required supervision processes.

Mpehle (2012:217) states that if corruption is not squashed urgently nor attended to by the relevant institutions within the government structures or the private sector it manifests into “a philosophy of an organisation that will ultimately destroy its economic efficiency”. Mdlongwa (2014) further emphasises that the illicit performs have developed spontaneously and rampant in most municipalities, thereby resulting in inactivity and in the institution’s, failure leading to poor service delivery. This is seen even at Eskom where some suppliers add stone to the coal knowing there will be no consequences as the saboteurs are on the company’s payroll (Mthombothi, 2022:19). The ultimate consequences of institutional failure are slow economic growth that manifests into a recipe for the government’s malfunction.

A practical example of a manifested corrupt culture as espoused by Mpehle (2012) is seen in the Free State’s Mangaung Metropolitan Municipality where a law firm billed the Municipality over one million Rands for translating by laws which were never seen at the municipality. The report by Makhafola (2022:8) states that, “even the custodians of bylaws in the council haven’t seen the translated work”. According to some council members, there are no such translated by laws as they do not exist. The invoices that were submitted were just to get money out of the municipality as the way in which the corporate service manager uses to “hire” ghost workers in the metro.

Another embedded cultural corruption is seen at Emfuleni Municipality in Gauteng which has paid over R65 million rands to Metsi-a-Lekoa its water service authority entity while at the same time the municipality experiences a loss of over R500 million or 56% of the water due to leaks. In the 2018/19 financial year the municipality paid R17 959 165.26. In the 2019/20 year, the expenditure was at R19 633 849.46; while in 2020/21 the expenditure was at R17 637 412.99. In 2021/22 the expenditure was at R10 601 586.76 (Makhafola, 2022:8). The reason for the exorbitant amounts was

that Metsi-A-Lekoa was understaffed for the financial years the municipality was paying high fees (Mabena, 2022:3).

Gumede (2022:20), further states that widespread corruption creates a perception that the leaders of the ruling party are there for their personal gains and self-enrichment only and they are not concerned about the interests of everyone. In the same vein, Mthombathi (2022:19) indicates that the incompetent leaders have brought government to its knees through corruption and incompetence. That is the reason we see raw sewage spilling into the rivers and the sea.

3.3 Elements of good governance

Good governance is characterised by four elements “that will bring about an efficient, accountable, and dependable public service” to the civilians. Briefly, developmental local governments should ensure the availability of the suitable structures, standards and planned path that replicate additional external communal emphasis. Those elements are amongst others:

3.1.4 Accountability

Thornhill (1995) as cited in Madumo (2015:156) states that the local government is at the coalface of service delivery. This implies that, this sphere of government is in a state of interacting with the people and provide services to its citizen easily. The Constitution of 1996 further mandates the local sphere of government to safeguard an all-encompassing tactic to all stakeholders when fiscal and forecasting developments are assumed during the Integrated Development Plan (IDP), meant to put the municipal strategic vision aimed at addressing the challenges that involve developing sustainable settlements for a period of five years. The purpose is for ensuring people ‘s needs, aims and social components required for daily living are met not to the exclusion of the indigent’s societies (White Paper on Local Government of 1998:27).

These legislated forecasting processes by the local sphere are in a condition and position to launch a progressive strategy for the short, medium, and long term so that it can effectively possess positive results in relation to service delivery. It’s vital for the local sphere of government to guarantee honesty, candidness as well as answerability and promise to consult and agreeing with the communities loyally.

These procedures are there to promote local democracy and its relations to the local communities to partake in municipal affairs for ensuring a smooth relationship of interaction amongst the three spheres of government (Madomo, 2015:156).

With this interaction, Section 152(1) of the Constitution of 1996, states “that the objectives of the local government are to: provide democratic and accountable governance for local communities; ensure the provision of services to communities in a sustainable manner; encourage the involvement of communities and community organisations in matters of importance to the local government” and to make municipal bureaucrats accountable for their activities (Madomo, 2015:156).

3.1.5 Availability of information and transparency

In enhancing policy scrutiny, as well as to promoting community discussion and decrease the probability of illicit activities such as corruption, the public should never be seen as meagre customers or beneficiaries of public services but should be regarded as the essential part of governance. They consequently ought to partake in the determination or decision-making processes on the goods and services provided to them. The envisioned strategy alleged to pursue people ‘s participation in the government’s events and contribute to the processes of taking appropriate decisions with maximum control of their lives (Mdlongwa, 2014).

The transformation of community inclusivity on taking the decisions that affect them was propagated to the people by union of the workers which stressed community involvement on matters that affect them directly on a day-to-day basis in their lives (Mdlongwa, 2014). It is imperative that, the people as well as the communities should not lack awareness and knowledge with respect to their human rights, growth and development, as this will hinder the provision of services due to the fact that the societies end up not knowing how or who to speak to or raise their concerns when facing obstacles of delivering goods and services in their societies (Masiya, Davids & Mangai, 2019:22).

This permits some illicit minded municipality workers to act with latitude bearing in mind that the public will not argue with their deeds because they are not informed about their rights nor processes to follow when meeting the challenges and having their rights abused (Mdlongwa, 2014).

3.1.6 Addressing the service delivery challenges in local government

The municipal councils and municipal administration should facilitate and augment educational programmes for educating and embarking on the awareness campaigns regarding their rights and these can be approved by Non-Government Organisations (NGOs) because they will improve public knowledge and institutional innovation (Mdlongwa, 2014; UN, 2015:46). Such educational programmes should be extended to the communities by educating them on participating in the municipal affairs and the understanding of the legislative key aspects such as the Municipal System Act of 2000 and the Municipal Finance Management Act (MFMA) of 2003 and its implications on their livelihoods as first preference needs to be on the basic needs of the community (Ndevu & Mullere, 2018:182).

The modes of communication need to be improved and they must take the form of the modern communication criterions such as social media platforms and conventional commercial media institutions as long as they can be accessed by most of the civilians so that they can be stimulated to partake in significant municipal developments such as the municipal meetings for the Integrated Development Plans (IDPs) (Mdlongwa, 2014).

3.1.7 Rule of law

South Africa is characterised by constitutional supremacy, meaning that there is no one above the law (Malan, 2014:1965). In that case, the municipalities should adhere to the laws of the country that are emanating from the South African Constitution which stipulates the human and basic moralities of all the persons and the crucial statutory laws governing and regulating communities within the municipal areas such as employees on matters not only limited to votes casting but, likewise about the self-determination of language and partaking in actions like marches and peaceful protests within the confines of the law if the citizens feel that their rights have been violated (Mpehle, 2012:216).

Ndlovu (2016:36) indicates that the failure to adhere to the legislations will destabilise elected organisations and it presents a danger to the rule of law. President Cyril Ramaphosa in his submission to the Zondo Commission which was instituted by the Zuma administration to find facts regarding the state capture in South Africa stated that: exploitation of resources has mushroomed greatly in the

South African societies as well as the economic sector to an extent that the statutory principles were undermined and not respected, ultimately bringing disrespect to the rule of law (Naki, 2021:3).

This in turn will be a threat and it will destabilise the democratic order in South Africa. Practically, the level of providing goods and services at the municipal level demands legitimate municipal involvement, because, of the demand and need strict, honest, and absolute public accountability. Failure to comply with this move, the municipal dwellers will end up embarking on protests that are violent and that may lead to the destruction of property including the existing infrastructure (Tsheola, 2012).

Nembambula (2014:150) concluded in a study that the South African constitution made provision to have all the community members able to engage in the peaceful protest actions on condition appropriate channels as well as procedures are adhered to before the gathering takes place. The laws always call for peaceful protests even if they are related to service delivery. The study discovered that most of the people who tend to be violent were at some stage working in the municipalities or were politicians who were suppressing the views of some community members who protested peacefully during their tenure of office.

Nemambula (2014:150), further discovered that some demonstrations which were thought to be related to provision of services were in one way or the other not related to service delivery, but they were about the community members being unhappy about the municipal elections with some contenders on the list. Other inherent causes of violent behaviour in service delivery demonstrations were associates of some community members who feel they are no longer commanding supremacy to the councillor who no longer wanted to represent them on matters that bother them such as water, electricity, and sanitation after being elected to the office.

3.1.8 *Independent judiciary*

In upholding the integrity of the municipality, the corrupt officials if found responsible of perpetrating illegal violations or offences ought to be probed and discharged timeously in relation to the rule of law as that will boost the community's confidence. Such action should be taken by an independent judiciary which is not influenced by any politician (Mdlongwa, 2014).

3.1.9 Wastewater infrastructure challenge

Most Wastewater Treatment Plants (WWTP) in South Africa are in a state of despair. For example, the Sebokeng and Rietspruit WWTP effluent contaminated the Vaal River with a high count of ecoli as per the 2019 independent study that revealed that there is a “130 000 000 ppm/100MI in the water” while the expected legal count should be a maximum of 400 ppm/100MI (Pretorius, 2019).

One of the factors that causes infrastructure challenges is the rural urban migration and the high level of foreign nationals in the country because most of them stay in locations and in low-cost houses commonly known as the Reconstruction and Development Program (RDP) houses and in homes that are adjacent to the towns. The cities have been converted to renting rooms or hostels. These illegal conversions place a serious strain on the existing municipal infrastructure which in most cases was never expanded since the advent of democracy in 1994 (Mabotha, 2019:4; Tempelhoff, 2021:134). Consequently, this situation negatively impacts on public health and on the environment as the pipes block and the sewage fills up the streets (Tempelhoff, 2021:134).

3.1.10 Adaptive risk management planning / budget allocation

Most countries indicate that the demand exceeds existing financial resources whereas the main problem or barrier is no funding as instead the political parties are accompanied by the capture of funds by some people who are proxima to power. It was found that most institutions that are dealing with water provision overestimate the capacity and the planning role in water management, as they do not make room for variations so that more resources can be added to the project (Musingafi & Tom, 2014:55).

In the planning process, the less or low budget resources are allocated to the wear and tear for maintenance purposes as there are more WWTP experience runoffs due to their having no expansion since the advent of democracy in 1994 and the overload that comes from the new extensions of the residential areas (Musingafi & Tom, 2014:73; Mabotha, 2019:82). The growth of the industries is also a negative contributor to the state of water provision as they contaminate the sources with the

hazardous chemicals which are released directly to the sewers, the rivers, and to the wetlands (Musingafi & Tom, 2014:73).

To avoid such risks, the community needed to be on board regarding the technical capacities and the participation platforms towards sustainable water and sanitation management initiatives. Having the community on board will in a way drive away the perception that proper sanitation is only a flushing toilet (Mudombi, 2020) while the community experience water shortages in most parts of the world at large and in South Africa in particular. In most parts of South Africa, the deteriorating water quality is brought by the urbanisation growth which is mostly found upstream of the rural areas and as the effluent of the WWTP gets released to such water sources and degrades the water quality to those people who depend on rivers as their primary source of fresh water (Musingafi & Tom, 2014:73).

Furthermore, the overspending on water and sanitation projects is accompanied by the lack of risk management with no applied consequences outcomes, the absence of answerability, openness, and dedication to ensure that the services work for both the poor and the marginalised citizens. One of the pertinent reasons that is usually forgotten by those in power is to ensure that service delivery is a policy initiative that must ensure that the people's lives get the desired services on the water and sewage system (Akinbode, *et al.*, 2012:189).

3.1.11 Service delivery agencies

The countries that are following the British tradition of the local government tend to look at municipalities as service delivery agencies, and they specify functions, finances, boundaries, and central control (Akinbode, *et al.*, 2012:189). In South Africa, the role of the local government is mainly to deliver the basic services to the communities (Ndevu & Mullere, 2018:181). One of the challenges experienced in the current sixth administration is the provision of effective and efficient service delivery including water and sanitation. Unfortunately, most municipal public services in most countries including South African municipalities have for years been seriously criticized for poor services by different media platforms. In some cases, the criticism is from the press, civic organisations, and the community-based organisations who in

terms of the district development model are supposed to be part of the planning process (Akinbode, *et al.*, 2012:189).

3.4 Service delivery in Africa

Most African countries depended much on foreign aid for providing services to the people. Unfortunately, service delivery in Africa continues to fail to reach the poor. The cause of poor presentation in the delivery of service in the African countries is the unresponsiveness to changes in institutional arrangements, both at the central and at the decentralised delivery mechanisms (Masiya, Davids & Mangai. 2019 :20).

This demands instant action by the governments of African to review their political landscapes. This ended with the world-wide population recommending that for the African continent to achieve developmental goals as provided for by the millennium development goals that ended in 2015 there was a need to prioritise provision of services as a matter of urgency (Akinboade, *et al.*, 2012:187).

In most rural parts of Africa, most of the populations that are living in the countryside are deprived essential local necessities including fresh portable water which is clean and sanitation that is waterborne, essential health care, appropriate elementary schooling, as well as agrarian expansion services (Mccarthy, 2020.3).

Furlong (2012:2723) stressed that due to the neoliberal approaches applied in most parts of the continent towards the close of the 1970s it became gradually clear that most problems which existed due to the water supply across a range of contexts were in the global south, where large amounts of the population were without access to piped water and sanitation. In the North, the water supplies suffered from underinvestment, limited wastewater treatment, and high levels of leakage and consumption.

The reasons for the absolute poorly dysfunctional service delivery are the lack of answerability, openness, and dedication in creating essential services work out for the impoverished and marginalised societies. Furthermore, the planning for the impoverished is mainly highjacked by the elite's tendency of capturing the programs and by the poor service that is delivered by the appointed service providers due to

the absence of influence from the impoverished masses and their incapability to influence the administration. The literature states that, before any service can be delivered, it is imperative to evaluate if the desired policies will impact positively on the people and how the citizens will respond to them. These sentiments are in line with the public agency theory as explained earlier (Mccarthy, 2020.3).

3.1.12 Government and service delivery

South African government like any government in the world is confronted with service delivery challenges in obliging to the social responsibility of providing basic services to its citizens. The inadequate responses from the local government authorities on issues related to proper shelter such as housing, sanitation, infrastructure, and electricity developed to be matters that needs to be addressed spontaneously (Pithouse 2011, as cited in Bond and Mottiar, 2013:290).

One of the challenges is the staffing that must work together with the consumers who anticipate the cost-effective supply of local services or goods regularly. These, therefore, make it crucial for the organisations to employ excellent staff and develop good retention policies to keep their management and employed staff to execute actives of the council to the optimal due to the fact that the executive's performance is of utmost importance and essential in satisfying the purposes of government (Mpehle, 2012:217).

Gumede (2022:20) indicated that the policy of "cadre deployment in public service and giving contracts only to political capitalists with connections to the party has alienated competent citizens and companies" as the people feel that the government is only for its members and supporters.

Nengwekhulu (2009:344) as cited in Mpehle (2012:217), further stated that it is imperative and necessary for appointing new recruits in the public sector on merits post the fair interview processes. Furthermore, it is said that for government and municipalities to experience great performance, care should be exercised when hiring and appointing staff in the managerial positions with emphasis placed on skills and honesty by those in power.

Deployment of politically affiliated members by a political party in power should if applied be based on merit. Appointing people on political party membership need to be relooked because majority of such appointments are dominated by unskilled

people, and in most government departments and municipalities of South Africa senior officials who are mostly appointed on patronage find it difficult to be neutral when executing their duties in government (Ndevu & Mullere, 2018:188).

3.5 Environmental impacts on service delivery

The environmental impacts are issues that generate and attempt to tackle the environmental problems thereby affecting the provision of goods and services in the area under investigation. Such impacts are emanating both universally and locally. In solving the problems, the scientific approach from the centres together with the fundamental ecological knowledges needs to be generally applied in most circumstances, unfortunately the practical application enforces that, specific local conditions must be forcefully considered, and this makes the 'leaders to develop skills of identifying difficulties within the *universal* framework and learn to analyse the complications based on the local circumstances and conditions (Mino & Hakani, 2013:3).

Furthermore, the leaders should develop the skills that will enhance the understanding of socio – cultural ecological and environmental factors that will improve sustainability of the eco-system that is economically, socially, administratively, and politically within their institutions mandate to promote good living to all the populace based on the people 's living conditions, status and the actual location (Mino & Hakani, 2013:3; UN, 2015:44).

3.1.13 Political environment

The local sphere of government in South Africa is mostly subjugated by political interference by the political parties who mostly make the political administrative interface more complex and difficult to manage given the conflicting relationships of the different political parties. In some cases, the appointment of senior officials who are aligned to some politicians or to a particular political party is done through force (Templehoff, Ginster, Mahabir, Jaka, Kruger & Nkomo, 2021:111).

The argument projected by the political office bearers in selecting and employing managers affiliated to their political organisations is the recruited officials will in their call of duty backup the philosophies of the organisation for service delivery and

therefore pilot the governing regime's delivery of services to the best level. This notion needs to be scientifically verified to find out if it is really improving service delivery or not (Mpehle, 2012:217).

As earlier indicated by the Auditor General of South Africa (AGSA) that in most cases poor performance is propelled by the municipalities' refusal and very slow implementation or total avoidance of the Auditor General's recommendations to implement action plans (AGSA, 2019:8). The municipalities and the public institutions that perform well attribute this to the existence of good policies that assist in fighting corruption. Such policies do not really guarantee good service delivery. Good service delivery is guaranteed by the successful execution, observing, and assessment of the existing good plans (Mpehle, 2012:217).

In some instances, the service delivery relating to water and sanitation is delayed by the unwillingness of some political representatives or councilors who are not ready nor willing to communicate with their constituencies and residents (Tempelhoff, *et al.*, 2021:129). Looking at the philosophy of servant leadership, the expectations of the theory are not implemented. In essence, it is expected that the leadership in a municipal council both politically and administratively should overturn the deficiencies and prescribe the best ways in which things are done in the running of municipal affairs due to ineffective and inefficient management structures (Wessels, *et al.*, 2021:272).

These sentiments align perfectly with the expectations of the agency theory. Consequently, the governance becomes weak, and the services do not reach the people despite the attempts by the *batho pele* principles which emphasise the need to consult public service consumers, set service norms, enhancing access, and guaranteeing politeness (Lovuno & Mokoena, 2019:269).

In a study conducted by Akinboade, *et al.* (2012: 189), the failure to provide adequate water and sanitation services results in people dissatisfaction and consequently the people resort to service delivery protests because they turned to be highly disappointed by government's performance and this leads to less engagement which is followed by mistrust.

This was displayed at the 2021 local government municipal elections where the ruling African National Congress lost some municipalities such as Tshwane, Ekurhuleni, and Gauteng to the opposition parties (Cele, 2021). This practical turn of things proves what the former President of South Africa, Thabo Mbeki once indicated in 2005 when giving a parliamentary speech that substandard provision of services will in future cause instability in our country South Africa (Akinboade, Mokwena, & Kinfack, 2013:459).

3.1.14 Economic environment

The role of the local sphere of government in South Africa is to deliver basic public services to its citizens and inhabitants, unfortunately in post-apartheid South Africa, it is not easy for the local government to deliver effective and efficient services. This is proved by the protests demanding better services, media criticisms and the Community Based Organisations (CBO) actions towards the services that are delivered by the various municipalities (Akinboade, Mokwena, & Kinfack, 2013:458). Gcora and Chigona (2019:2) further indicate “that the meager fiscal administration proved to be rampant in all the three spheres of the South African government.

According to the 2017 Auditor General’s report, only 18 out of the 257 municipalities successfully published quality financial statements and performance reports that made them to legislatively qualify for the statutory requirements that are applicable in the municipal governance. Instead of improving on the audit outcomes, the 63 municipalities performed poorly than the previous reporting period. A total of 74% of the municipalities did not intensively follow on the previously reported allegations of fraud, mismanagement and irregularities that contributed to the poor audit outcomes (AGSA, 2019:8).

Poor performance is also fueled by the municipalities’ unwillingness or the very slow implementation or the total avoidance of the Auditor General’s recommendations and action plans (AGSA, 2019:8). There were poorly structured action plans (AGSA, 2019:12), and inadequate monitoring or efforts to implement action plans (AGSA, 2019:27, 100; Wessels, *et al.*, 2021:246).

According to Oberholzer (2012), the South African municipalities seem to be not willing to improve their audit outcomes, but promises are made by the mayors to improve on the economic measures within the council. For instance, in 2012, the Amathole District Municipality Mayor in the Eastern Cape promised to deliver better audit outcomes after a series of receiving non clean audit (AGSA, 2019:107; Kwaza, 2017:227). In an environment where the municipalities get clean audit, it does not necessarily mean there is sufficient supply of social amenities such as water and sanitation that are in good conditions, but it is just an indication that the administration has improved in the running of the municipal affairs (Maluleke, 2021:18).

To improve the economic conditions in municipalities, the minister of CoGHta launched operation clean audit in 2009 with an intention to have all the municipalities acquire clean audits and financial statements by 2014 (Powell, *et al.*, 2014:1; Wessels, *et al.*, 2021:252). The South African municipalities' economic statuses are dominated by insufficient delivery of services on appropriate time or backlogs, management inconsistencies, fraud, deception, illicit administration of fiscal resources, the shortage of skills that contribute to insufficient capacity to deliver services as well as poor performance management and inadequate training (Wessels, *et al.*, 2021:252).

3.1.15 Administrative cultural environment

Legislatively, politicians and administrative staff are morally and ethically obliged to serve the people fairly and equally in relation to the acceptable norms and values. Furthermore, the administrative culture requires that when governing equally and fairly, a need arises to 'analyse and design effective as well as efficient administrative cultures. This environment requires the politicians and administrators to treat people in a high and morally accepted behavior (Lovuno & Mokoena, 2019:264). These sentiments are in line with the adoption of the Malawi philosophy of the newly constituted cabinet by President Chakwera.

The period between 1870s to 1900 saw the African administrative culture being eroded by the growing of the indirect rule from the western countries such as Germany, Portugal, Britain, Belgium, France, Italy, and Spain. In addition, the Berlin

Act of 1884 was enacted through Otto Von Bismark's influence which regulated the European power in Africa and introduced the indigenous European system of governance with its own culture. The system was monitored and enacted by the colonial secretaries, administrators, and some unofficial bodies (Lovuno & Mokoena, 2019:264).

It is assumed in the study by Lovuno and Mokoena (2019:266) that if there can be an introduction of the African *ubuntu* and the *batho pele* principles, the rule of law will be upheld, and services will be provided to the people because all the members of the society will be able to define the public problems that affect them. It is within the confinements of this environment where in the society through the ballot mandate the politicians to carry out the monitoring role of municipalities and execute service delivery, which is supposed to be sustainable, effective, efficient, productive, must improve self-reliance, and promote civil cooperation, as well as improve public participation.

Akinboade, *et al.* (2012:183) further indicated that to have a successful local government, there is a need for more customer focused and ensure appropriate responsiveness to the needs of the people. The United States' municipalities like some few South African municipalities have a close relationship with the institutions that conduct research and implement the recommendations as they mostly indicate the gauge of citizen satisfaction.

3.1.16 *Legal environment*

The public administration in Southern Africa is characterised by the notion of separate powers namely: the legislative, executive and the judiciary which is independent and ensures that the universal recognition of human rights is applied to all by guarding that the administrative and the executive protect human dignity, equality, freedom as well as peace (Lovuno & Mokoena, 2019:266). Noting that water and sanitation are human rights, it is within the incumbent of this environment to ensure that clean, portable water and decent sanitation are provided to all as it is a human right (UN Water, 2018:2).

Legally, the right to water is espoused by the United Nations' attempts to ensure that everyone should have access to sufficient, harmless, adequate, substantially reachable, and cheap water for own and household use. Sanitation as a right, forces all the human beings to possess tangible and reasonably priced sanitation that is reliable, clean, protected, ethnically adequate, provides privacy and ensures dignity to all the users in all the spheres of life (UN Water, 2018:2).

3.6 Establishment of the water Catchment Management Agency (CMA) in South Africa

The catchment management agencies are the subsidiary of the national Water Management Act, (Act 36 of 1998). The Act was widely recognised and respected by almost all the countries worldwide. A challenge which the legislation encountered in South Africa was its origin from the water rich European countries to be implemented in a water scarce country (Schreiner, 2013:244).

The establishment of the water catchment management agencies found it not easy to be established as it was intended to transform the irrigation boards to water user associations (Schreiner, 2013:40). The government's intention was to establish nine CMAs within six months in line with the provisions of the National Water Management Act (Act 36 of 1998). By 1998, only two CMAs were established with no firm decisions made on the best management strategies on the national water resource infrastructure (Schreiner, 2013:40).

3.1.17 Challenges in the establishment of the water Catchment Management Agency (CMA) in South Africa

According to the legislation as enacted in the National Water Management Act (Act 36 of 1998), 19 CMAs were supposed to be implemented and established across the country. Unfortunately, only two were functional by 1998 while the Act indicated that nine were supposed to be established within a reasonable time frame (Schreiner, 2013:243).

One of the inhibiting factors experienced by the non-establishment was the payment of performance bonuses to the human resources especially in the management echelon despite not reaching their annual targets. The heads of the regional offices

were not even accountable for reaching their targets. In a later stage, the senior managers in the department (DWAF) started questioning the purpose and function of the CMAs. This led to the halting of the establishment process to allow further work to be done because the trade unions and the left groups regarded the establishments as privatising the public service by transferring government employees and functioning to parastatals with no guarantee of permanent jobs (Schreiner, 2013:40).

In essence, the move was viewed as removing employees from government job security or from the protection of direct public sector employment because the financial sustainability will depend on the stakeholders' paying of services (Schreiner, 2013:244).

3.1.18 *Fixing the plane on air*

Despite the legislative requirements to have nine CMAs, there are two only which are functioning: The Breede – Overberg CMA (BOCMA) and the Inkomati Usuthu CMA (ICUMA). Post 2012, it was then resolved to implement the nine CMAs over a three-year period with unresolved argument as to what functions will be delegated there-of and the time frames (Stuart, & Meissner, 2018: iv). Furthermore, a challenge was realised by the CMAs in adhering to the mandates of developing the Catchment Management Strategies (CMS), thereby constituting a design to achieve the safety, utilisation, expansion, preservation, administration, and regulate water resources in their respective WMAs (DWAF, 2004).

Given the challenges, the CMAs were reduced due to the model adopted for management and sustainability considerations in relation to water funds supervision, financing, capabilities, competences, and proficiency in instruction, and attempt to develop cohesive water structures supervision. The current catchment management agencies (CMAs) in existence are the following: Limpopo, Olifants (Mpumalanga Province), Inkomati-Usuthu, Pongola-Umzimkulu, Vaal, Orange, Mzimvubu-Tsitsikamma, Breede-Gouritz, and Berg-Olifants (Meissner, Funke & Nortje, 2016:2).

3.1.19 The role of the water Catchment Management Agency (CMA) in water supply

In South Africa, the population explosion surpassed the inflow holding capability of the current wastewater treatment plants that were historically and originally constructed for less inhabitants that did not include most black Africans. In the pre – democratic dispensation, there were approximately 15 million people and 35% of the population was without portable safe water and over 20 million which accounted for 53% were without sanitation services (Masindi & Dunker, 2016:1; Meisher, Funke & Nortje, 2016:1). In solving the challenges of water use, the democratically elected regime developed the water management agencies.

The responsibility of the water CMA is derived from the decentralised role by the South African government in line with Chapter 7 of the National Water Act, Act 36 of 1998 (RSA, 1998; Masindi & Dunker, 2016:2). The obligation of the CMA is to ensure smooth running of water at the catchment levels, to develop the catchment strategy, as well as to provide guidance on the safeguarding, training, preservation, and the use of water in the neighborhood. The agency should further ensure the successful implementation of the decisions that are made regarding water use by meeting the basic needs of water supply, thereby promoting equitable access, and facilitating the socio-economic development by working with local stakeholders such as communities and ensuring that the people’s voices are heard (Meisher, Funke & Nortje, 2016:7; DWA, 2013).

The Capricorn District Municipality’s CMA is the Olifants River Catchment which was established to cater for the Limpopo Province (DWA, 2013). In ensuring that there is appropriate provision of services, the constitution also requires the local sphere of government to ensure involvement of the communities in their proximity so that they can identify the people ‘s requirements in their jurisdictional area in relation to existing funds and infrastructure. When coming to water-related issues, the water service authority should develop a Water Development Plan (WDP) which guides all the preparation for planning and execution of water supply within the locality and developed plan must be adopted by the municipal council (RSA, 1997; Mbeki & Phago, 2014:206; City of Cape Town, 2017:9).

3.1.20 Effective cost management systems of water conservation and sanitation management

South Africa is a nation which was exemplified by the laws of segregate development amongst the whites, blacks, and Indians. The settlements were also grouped as such (Bohler-Muller, Davids & Roberts, 2016:3). One of the processes of overthrowing and collapsing the apartheid government and municipal administration was the rent or tariff boycott which started in September 1984 at Sebokeng, Sharpeville and later it spread nationwide thereby creating civil unrest (Battersby, 1988). The culture of not paying became rooted in most people living in urban areas and this has continued up to now.

Post 1994, water, and sanitation were provided and installed in the people's homes both in the urban and in the rural areas. The municipalities' expectation was to have people who can pay for the services they receive. This became a challenge due to the low-income families who could hardly afford water services (SIWI, 2016:6).

Some had an attitude stating that water is a basic human right which should be provided freely under the new South African water laws. The challenge of non-payment leads to inefficiency and ineffectiveness on the management of costs incurred because, globally there is no cost recovery to sustain the financing of the projects and provide appropriate maintenance from the raw abstraction of water usage for domestic, agricultural, industrial, as well as sanitation uses and the release of the effluent from the Waste Water Treatment Plants back into the environment, as only an insignificant percentage of the "wastewater is treated and managed safely" (Mateo-Sagasta, Rachid-Sally & Thabo, 2015; SIWI, 2016:6).

The effective cost management systems imply that the cost recovery and sustainable financing respects the human rights to water use by introducing tariffs which are affordable and do not compromise the fair usage of water by the society (SIWI, 2016:6). This explanation is supported by Luu & Halog (2016:327), stating that environmentally friendly water management and sustainability implies that the water resources should be used in a way that "meets the needs of the present without compromising the ability of future generations to meet their own needs". Furthermore, the pollution prevention policies and the investments in wastewater infrastructure were surpassed by the population growth and the industrial

development (Hernández-Sancho, Birguy Lamizana-Diallo, Mateo-Sagasta, & Qadir: 2015).

When the policy of indigents was enacted, almost every user in the township wanted to be treated as an indigent. The problem was exceeding the allocated water limit, and the people were expected to pay for the excess, and most did not afford to pay. To recover the costs, a cross subsidisation of high earners and funding from taxes (subsidy) was introduced (SIWI, 2016:6; Schreiner, 2015).

The problem with this process was the inappropriate metering by the municipalities. Some people ended up not paying for water because the billing might have indicated that the bill was based on 'actual' readings while the readings were not real (Gladwin, 2018). This was evident when the residents of the Polokwane local Municipality falling under Capricorn District Municipality protested over the incorrect bills for a period exceeding two years. The community demanded that the municipality should ensure that an audit is conducted or write off the accumulated erroneous debts. The residents complained that their water and rates bills were abnormally high, and they were tired of complaining at the municipality offices (Nxumalo, 2020; Erasmus, 2020).

In the Capricorn District Municipality, the Polokwane Local Municipality Council ended up repealing the accounts from Mankweng to the tune of R320,6 million. Post writing off the debt, the municipality had to continue supplying 12 megalitres of water per day and handle sanitation estimated at 5,6 megalitre per day at a cost of R3 million. These costs cannot be recovered (Erasmus, 2020).

One of the problems causing ineffective costs is the water that is lost due to the leaks resulting from the poor maintenance within the distribution system and the insufficient income from water. The income received from the water and the sanitation bills is not only used for operation and maintenance but for other activities within the municipality. Issues such as pollution charges are also ignored in most parts of the country, and that can be a method of introducing the user-pay principle (SIWI, 2016:6; Mateo-Sagasta, 2015).

In most rural areas of the Capricorn District Municipality, cost management is not easy because most of the areas do not have infrastructure such as pipes nor meters

for measuring consumption. Over 80% of the population receives untreated water direct from the boreholes (Mpe, 2019:3).

3.1.21 Improved, effective, and efficient supply of water and sanitation

Likhotal (2013:85), stated that all the countries, mostly those who are developing need a flexible, adaptive and water managing structure which is receptive and adaptive to the changing demands of the society. In South Africa the challenge is brought by lack of professional ethos and some government departments are characterised by and are plagued by 'chronic inefficiency' with revenue absorption on aspects that are supposed to generate revenue (Balkaran 2014:22; Ndebele & Lavheni, 2017:352).

Furthermore, to achieve an improved, competent, and operative water provisioning and sanitation management, the municipalities and the central government should be accountable, as well as transparent and they should consider the inputs from the people when making water policies and when effecting prices for consumption (SIWI, 2016:8). To experience a cost-effective supply of water and sanitation, the transmission point and the distribution networks need to be cared for. Avoiding leakages and water loss by installing the technology that will detect leaks within the network would be helpful in reducing waste (Kazeem, Yskandar, Bolanle & Abu-Mahfouz, 2017:2).

The rehabilitation of pipes, the reduction of water pressure, saving the energy applied and wasted in water pumping, and reducing the carbon footprint while also increasing the revenue generated by the water utilities, are also some of the ways that can be used to cut costs (Kazeem, Yskandar, Bolanle & Abu-Mahfouz, 2017:2; Wu, Farley, Turtle, Kapelan, Boxall, Mounce, Dahasahasra, Mulay & Kleiner, 2011).

A practical example was experienced in 2001 – 2002 by the Cape Town City when they reduced pressure in Khayelitsha township and tremendous results were achieved. The Minimum Night Flow (MNF) was 1, 600 m³/hr. Approximately 1, 200 m³/hr were leaking from the sewer system, thereby indicating that the critical problem was household leakage. Phase one was the installation of Pressure Reduction Valves (PRVs) into the water supply mains to reduce pressure. The second phase was the installation of advanced electronic controllers to manipulate

the pressure during the off-peak periods. Before pressure reduction, the average daily flow was 2, 500 m³/hr (21 million m³/a, this implies that 75% was wastage) with a minimum night flow of 1, 600 m³/hr. After the first phase was completed, the average daily flow was reduced to 1, 790 m³/hr and the minimum night flow was also reduced to 1, 180 m³/hr. The preliminary results of phase two indicated that there had been a reduction of an additional 430 m³/hr (to 750 m³/hr). These reductions indicate that the final savings were in the range of 9 million m³/yr out of the original 21 million m³/yr (Mckenzie, 2002).

Finally, to ensure sustainability and the efficient usage of supplied water, the public attitude towards the use of water needs to be altered so that the consumption can improve, and the over-use can be reduced without the municipality taking drastic measures against the inhabitants (SIWI, 2016: 6). Furthermore, one of the factors that hinder effective and efficient water supply is the norm which most municipalities have adopted by not meeting their constitutional obligations. In some municipalities, the central government funding is the only income and nothing or very little is collected from the payments of property rates and municipal services (Balkaran 2014:22; Ndebele & Lavheni, 2017:352).

3.1.22 *Impact of overpopulation on sewage systems*

The communities in overpopulated areas such as those in Dunoon in the Cape Town Municipality create a problem of flooding sewage by removing maintenance hole covers and placing foreign objects such as dead dogs, cats, sheep heads and sometimes-human fetus as it was also found in Georgia (WWD, 2018). The other problem is the lack of education about sewage plants and the processes of running effluent to the wastewater treatment plants as well as the people's lack of knowledge regarding their rights (Luhanga, 2019:8; News 24).

This seems to be a problem in most parts of the municipalities as was found to be happening in Mankweng, Polokwane Municipality where the municipal workers complained about community members opening maintenance holes within their yards permitting foreign objects such as stones and sand to run off to the plants and damage filters (Mabotha, 2019:83; Mabotha, Netswera & Ganda, 2019:147).

3.7 Conclusion

The preceding paragraphs shows that the provision of water and sanitation in the South African government as well as in municipalities is run by some officials who are not capacitated to hold some positions and some people in strategic positions lack competent skills in planning, budgeting as well as running of the WWTP. Currently the WWTP receives a high volume of inflow and ultimately it has high effluent that impacts negatively on the environment which should provide clean water to the people down streams. The main cause of contamination is urbanisation growth or rural-urban migration. Thus, as the population grows, the amount of water and sanitation requirements increases. The municipalities such as Polokwane, which is in the Capricorn District are experiencing extra burden on the drainage infrastructure as it presently run at almost 85%.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

To justify and present a logical flow of the study's research methodology, the study outlined the method that was applied in gathering data and unfolded the research design. The sampling method as well as the techniques used in data collection, the applied processes, the instruments used and the explanations of the ethical considerations that were required in the study are explained in this chapter. To give a full view and understanding of the chapter, methodology is defined in this study as the approach or a design of accomplishing, as well as the process used and linked to the methods used to achieve the desired outcomes towards the *epistemology* (the theory of knowledge embedded in the theoretical perspective applied in the methodology) and *ontology* (the theory that makes enquiries of the facts that exist on the objects and their relationships) that were applied. Goundar (2019) termed the research methodology as the methods by which one may proceed with their research.

The study ensured that the research methodology that was used engaged the correct procedures to find out the solutions because the methodology involves the learning of the various techniques that can be used in the research and in the conducting of tests, experiments, surveys, and critical studies. In essence, the research methodology paves the way for research methods so that they can be executed properly. The research methodology turns to be the beginning while the research methods are the end of any scientific or non-scientific research (Goundar, 2019).

4.2 Research methods

Mishra and Alok (2019:1) outline the research methods as the processes and all the methods that are applied and used by a researcher during research to acquire and gather data for the research that is being conducted. Goundar (2019) describes the research methods in almost a similar way stating that it is the various procedures, schemes and algorithms that are used in research. Basically, the research methods are effectively planned, as well as the scientific and value neutral processes. The research methods incorporate theoretical procedures, experimental studies, numerical schemes, and statistical approaches. They help to collect data and find

solutions to the problem in scientific methods that call for explanations based on collected facts, measurements, observations, and reasoning. Candidly, the research methods aim to find solutions to the research problems.

This study investigates the causes of poor sanitation and the insufficient provision of clean water by the post-apartheid government in the Capricorn District Municipal areas. As a matter of filling the knowledge gap, the information was collected, analysed, and conclusions were drawn from collecting both quantitative data using an interview guide mainly to community members and some community-based organisations members who were part of the population. Secondly, qualitative data was gathered by interviewing officials, politicians, and by augmenting the information from the quantitative data obtained from some community members as well as from the leaders of the community-based organisations.

The study further used secondary data in the form of research papers, journal articles, internet articles, newspapers, and books. All the resources that were used to provide more evidence on the anecdotal evidence collected by other researchers on the related topic were also consulted. In the process document, the analysis has taken much endeavor in the process. As a matter of fact, the researcher used the qualitative research methodology for this study as it was the most dominating method that was applied to answer the research questions. The quantitative research methods were used to ascertain the service delivery levels within the population, the sample frame, and the sample to help reach the conclusion to the problem.

4.3 Research design

The research design refers to the approach which moves from the original philosophical expectations to specify the selection of the selected population. The research design's choice is based on the researcher's expectations, the research skills, as well as the research practices, and it influences the way one collects data. This study used a mixed-methods research strategy for collecting, processing, and analysing empirical data. The qualitative strategy was used, and the research also used the structured interview guide, book reviews, journals, periodicals, government legislation and publications. On the use of quantitative strategy, the data from

Statistics South Africa (Stats SA) was used to determine the levels of quality of sanitation and water supplied in both the urban and the rural areas.

4.3.1 Sampling techniques

Sampling is referred to as the process that is used to choose a portion of the population for the study. Qualitative research is generally based on non-probability sampling and purposive sampling rather than on probability or random sampling approaches. In purposive sampling, the selected participants are chosen due to some defining characteristic that makes them the holders of the data that is needed for the study. The study firstly used the probability simple random sampling method from the drawn sampling frame. Bryman (2012:187) regards this sampling frame as the list of all units in the target population. During the data collection process, the study added the purposive snowball sampling method to gather more information as some participants were recommended by the drawn population as people with more information and data on the required study. The method became so useful in the study because some of the targeted population could not be accessed.

According to Naderifar, Goli, and Ghaljaie (2017: 2), snowball sampling is applied when samples with the target characteristics are not easily accessible. This method is also called the 'chain method' as it helps to access people who would not be easy to find. In this study, this was witnessed when referrals were made to some retired respondents and water professionals who provided vital information about the phenomenon. The researcher found the method to be more convenient for the study as the method took little time and provided the researcher with an opportunity to communicate better with people who had firsthand information and were not identified in the original sample as they provided vital information to the saturation point efficiently and cost effectively. On a contradictory position, snowball sampling may be less reliant on a reference sample (Naderifar, Goli, & Ghaljaie, 2017:2). Generally, the researcher first identifies a group of people, and while gathering data, the people who are not easily accessible get recommended to provide similar and further information on the study. Consequently, the study sample grows like a rolling snowball or a connected chain.

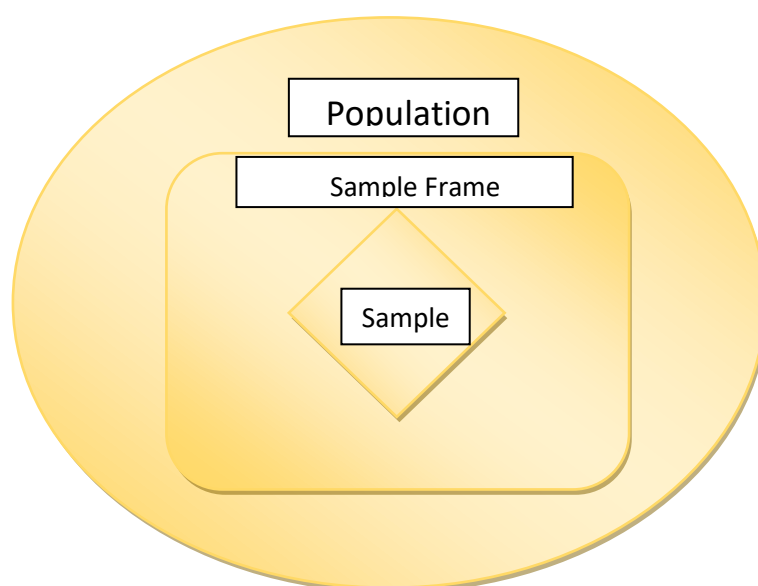
Furthermore, the study applied the purposive sampling method on the sampled or selected population. The reason for choosing this method was to address the

research problem in finding reasons that brought the challenges of water and sanitation in the municipality. The study tested the level of policy compliance in the provision of water and sanitation, and it also tested the level of infrastructural investment as well as the role of water agencies in the planning. The level of quality satisfaction of services provided to the communities was also tested together with the adherence to budgeting as well as capacity building. During data gathering, the community helped to test the level of communication on the programmes to the societies by the municipality. Furthermore, the study also considered the issues of gender and age because their impact was informed and based on the experience and expertise of each respondent.

4.3.1 Population

A research population is generally an extensive collection of individuals or objects that are the focus of a scientific query. The population is also known as a well-defined collection of individuals or objects known to have similar characteristics (Hassan, ud). The population for the study was five community members per local municipality from the Capricorn District, five formations within the community, ten municipal officials and ten specialists of water and sanitation within the Capricorn District Municipality. The additional 55 were added while the research process was unfolding. In total, 100 participants were interviewed.

4.3.2 Sampling



Source: Walliman, 2011:94

Figure 4.1: Sample frame in relation to population and sample (Walliman, 2011:94)

The study used the model of sampling as described in Figure 3 with the identified population of Capricorn District Municipality. In the sample frame were politicians, water and sanitation specialists, leaders of the community-based organisations and community members. A smaller fraction of the people who amounted to 100 became the sample of the study and the results were applied to the whole population. When collecting data, the purposeful probability random sampling technique was used because it gives the most reliable representation of the whole population when the results are analysed because it uses random methods of selecting the sample purposefully.

The selection procedure as applied was aimed at guaranteeing that each component such as the persons and groups irrespective of their proximity to the researcher get an equal opportunity of being selected. The selection also made provision to have every possible combination of the elements to have an equal chance of being selected. The study model is also supported by scholars such as Naderifar, Goli, and Ghaljaie (2017: 2) who indicate that purposive sampling and probability sampling give more representative generalisations of the research outcome. Walliman (2011:94) describes the *population* in research as not meaning “a number of people, it is a collective term used to describe the total quantity of things (or cases) which are the subject of the study”. In research terms, the population consists of “*certain types of objects, organizations, people or even events*”. Within the population, the researcher will find some groups that are of interest to the study. In the case of the phenomenon being studied, the *sampling frame* incorporated politicians, the leaders of the community-based organisations, the community members, and the specialists in water and sanitation within the Capricorn District Municipality. It was from this sampling frame that the sample was selected, as shown in Figure 4.1.

When selecting a population, care was given in that the characteristics of the population were known, and it was easy to select the representative samples. Avoiding non representative samples worked for the study because, the non-representative samples cannot be used to make accurate generalizations about the population. In the case of this study, the different characteristics were thoroughly investigated.

Literature describes the characteristics of sampling in the following manner, *homogeneous* that is when all the cases are similar. In the confinements of this study, the cases were different as there were politicians, community-based organisations leaders, community members and bureaucrats in the water and sanitation area. The cases were also *stratified* in the sense that they contained layers of people with different levels of income: low, medium, high, young, old and pensioners. In the process, there were *proportional stratified* cases, meaning the strata was known as there were people of different nationalities within the District Municipality and these were *grouped by location* as both urban and rural dwellers.

4.3.3 Ethical issues related to sampling.

The study acquired ethical clearance from the University of Limpopo (TREC) before the collection of data and permission was granted by the Capricorn District Municipality because the research involves interaction with officials, politicians, and members of the general community within their jurisdictional areas. During the data collection process, there were interactions that include in-depth interviews, surveys and observing people's behaviour and gestures when responding to questions. More information was provided in relation to the phenomenon, though some of the information was not addressing any of the research questions and objectives of the study.

The researcher further treated the respondents with respect and dignity by using the language they mostly understood and by not interjecting them when responding. The surety was provided by communicating the aims of the research as well as the protection of their identities and there was no coercion to participate in the study. The information provided was treated with the utmost confidentiality and it was solely used for the research study and for the conference papers that were to be presented by the researcher.

The researcher ensured that the questions asked during the interviews were not insulting nor embarrassing. The information that was gathered was analysed relatively and truthfully to avoid biases. This implies that an accurate account of the findings is documented in this study as presented. The researcher further avoided the fabrication of the findings to suit his expectations as the problem studied needed to impact on the policy formulation, and the input on the future strategies of

supplying water and sanitation in the Capricorn District Municipality. There were some recommendations for other parts of the country to improve service delivery and achieve government objectives in delivering quality services to the civilians.

The risk of bias is low when the population is homogeneous in terms of the target characteristics under question, whereas in non-homogeneous populations, this method of sampling has a higher risk of error as described by Naderifar, Goli, and Ghaljaie (2017:2).

4.3.4.1 Sample size

The sampling frame from the purposive method composed of five community members who were interviewed to the saturation point. There were five community formations, elders, youth and ten political formations on the ground. The further 55 participants came because of the chain method that was applied as it was necessitated by more information which was required to gather more information regarding the phenomenon. The intention was to give everyone a chance if selected and recommended to participate in the study and provide their opinion on the phenomenon being studied. Considering the lack of time and resources, the study chose a willing fraction to participate (Abdulai & Owusu-Ansah, 2014:11). This is supported by Saunders, Lewis, and Thornhill (2012) when they state that, “researchers need to draw only a fraction of respondents, called a sample, from the target population”.

4.3.4 Data Collection

Data collection is a tool designed to enable the researcher to collect comprehensive and relevant data for analysis and it contributes to knowledge production (Moyo, 2017:286; Parveen & Showkat, 2017:3).

4.3.5.1 Data collection approach and method

This study used an interview guide for both the quantitative and qualitative research method that was applied in the primary data collection. The questions were not asked chronologically as they appeared on the paper. They were asked randomly based on what the respondents said from the previous question to maintain the flow of information. This made the respondent to have a logical flow of information dissemination and made them feel more comfortable when giving out the information

known to address the phenomenon to a saturation point. The interviews took approximately 30 minutes and the longest was one hour 20 minutes.

Secondary data was used to substantiate what has been said by the respondents and it helped to justify the information that is discovered by the studies done in other areas. The sources used were newspapers, journals, books, and internet sources.

4.3.5.2 *Development and testing of the data collection instrument.*

The interview guide was given to some academics, and to some municipal engineers who adjusted some questions so that they could be cogent and easy to understand.

4.3.5.3 *Characteristics of the data collection instrument*

The data collection instruments possess the following characteristics as used in the study. The *unstructured interview* creates flexibility in data collection because it uses a research or question guide with the prerogative of the interviewer on how to ask the questions. It allows the interview to 'ramble' and to get more insights in relation to the attitudes of the interviewee more especially that there are no closed format questions. The author further described the *semi-structured interview* as an interview format that contains structured and unstructured sections with standardised and open type questions. These interviews were particularly useful when qualitative data was required. In some instances, the interview questions, which were not fully answered were repeated strategically several times over a period to track the developments and to allow the interviewer to have a good position in judging the quality of the responses, and to notice if a question has not been properly understood (Walliman, 2011).

Literature further described *face-to-face interviews* as a method better to be used for gathering primary data because they can be carried out in a variety of situations such as at home, work, outdoors, or on the move while travelling and they can be used to interview people both individually and in groups. The use of visual signs such as nods, jokes and smiles help get good responses (Gounder, 2019).

The *telephone interviews* helped to avoid travelling to the respondents who were not easily accessible due to their work schedule, and they were carried out more quickly than the face-to-face interviews. The disadvantage with this model of data collection model was the unavailability of using visual aids to explain questions, and there were

no visual clues. Secondly, interviewing very busy people on the phone was a problem as there were some disturbances such as incoming calls that were regarded as more important and needed to be responded to urgently. Sometimes loadshedding was affecting the calls because when it hit some network towers switched off and the transmission got affected. In some cases, the respondents had to drop the calls indicating that there is an urgent email coming from the superiors.

Both face to face and telephone interviews were audio recorded to retain a full, uninterpreted record of what was said. Gounder (2019) concurs with the method used and indicates that in analysing the data, the recording will have to be transcribed though it is a lengthy process if done in full.

4.3.5.4 *Data collection process*

The study collected both primary and secondary data to address the research questions, the research objectives, and the research problem. The researcher developed an interview guide for the qualitative data collection process and further structured a template for the community members to answer the structured questions that measured the depth of how water and sanitation availability in the people's yards or accessibility of communal infrastructure affected them. In some rare conditions, the researcher was obliged to use telephonic interviews and recorded only the audio for transcribing purposes and the analysis was done in *NVIVO 12 licensed by the university of Limpopo*. Most of the primary data was gathered using face to face interviews and all the interviewees did not have a problem with the recording if it was used only for the study and there were no malicious intentions.

During the data collection process, more respondents were roped in through the chain method as explained earlier, these were recommended by the respondents so that a realistic situation and accurate information can be provided to the researcher. To avoid bias, the researcher allowed more primary data to be provided with the aim of drawing conclusions that would provide accurate solutions to the phenomenon.

Walliman (2011:98-100) supports the method used by indicating that the usage of interviews to question samples of people is a very flexible tool and it provides a wide range of applications.

4.3.5.5 *Ethical considerations related to data collection.*

An assurance was given to the participants that no harm would be caused to them by participating in the study. The possibility of any risk was investigated prior to recording and conducting the interviews. To protect the participants against any victimisation, their identity is hidden, and numbers are given to the responses of the proposed study. Furthermore, the recorded material will be kept offline and in the archives of the researcher only.

William (2011:43–46), concurs with the researcher in this aspect and indicates that working with human participants in research work makes it imperative to always consider ethical issues about how you treat them. The author further emphasises that people should be treated with absolute respect prior, during and after the research. The study required that honesty be exercised while collecting, analysing, and interpreting data. This was done by explaining exactly how the results are and how the conclusions were arrived at. It is key that the accusations of cover-ups or false reasoning were avoided. The other imperative aspect is to acquire permission from the ethics committees that oversee that the research carried out in their organisations is in relation to the ethical issues. It is further required that honesty is essential in the substance of what is being written.

William (2011:46), further emphasises that the researcher has ‘responsibilities to fellow researchers, respondents, the public and the academic community’, that is, the researcher should provide accurate descriptions of what has been done, how it was done, the information obtained, the techniques used, the analysis carried out, and the results of the experiments. In essence, a variety of the details concerning every part of the work done must be outlined. Ethical consideration requires that if there is any reason for a possibility of bias in any aspect of the research, it should be acknowledged and explained.

4.3.5 *Data analysis*

The study used **thematic content analysis** with the Nvivo software package as well as Microsoft Excel when interrogating empirical information in qualitative analysis. The important aspect considered in the analysis was the ‘theme by theme and not the respondent after respondent’. This followed the data that was transcribed from

the audio text; conceptualised themes from theory as well as the literature review; fragmented data into themes from the literature review; conceptualised themes from empirically driven information and fragmented data into themes derived from conceptualised information (Wotela, 2017:52). The quantitative aspect of data analysis was applied in relation to the aspect of the required water supplied to the civilians and the sanitation required to run waterborne systems effectively as well as the amount of effluent released to the environment.

4.4 Internal and external validity of the study

Bryman (2012) as cited in Wotela (2017:237) describes reliability and validity as the 'methodological and disciplinary standards that are meant to ensure that a research report results from a rigorous process with integrity and is, therefore, of high quality and finds wide application' of the findings and conclusions. Sileyew (2019:9), defines validity in research as "*the extent to which the research findings accurately reflect the phenomena under study*".

The validity of research determines, '*whether or not the measurement collects the data required to answer the research question*' (Dennis, Carspecken & Carspeken, 2013:6; Somekh & Lewin, 2012:221; Willson-Kristen, 2012:5). In simple terms, validity in this study implied that the research quantified that which it was intended to measure.

The study used a structured interview schedule and Statistics SA figures for triangulating the results to ensure that the findings are valid. In this context, triangulation refers to the use of different perspectives in examining one's position (Terre Blanche, Durrheim & Painter, 2006:380).

This helped to gather adequate information about the factors affecting service delivery in the provision of sustainable sanitation and clean water to the people of the Capricorn District Municipal area. Furthermore, the researcher compared the conclusions with the literature to achieve the scientific conclusions.

Reliability takes effect when the same results or findings are obtained if the research process is repeated (Willson-Kristen, 2012:5). The researcher ensured reliability by ensuring that the interview schedule is cogent to the acceptable sample of 100 respondents, as they found it easy to understand the questions and give perspective

on their service delivery challenges from the municipality. The researcher further ensured that the appropriate themes were captured as it is an important aspect of qualitative research. The Nvivo Version 12 pro computer software package and Microsoft Excel were used for data analysis.

Objectively, the sample size was not small because on all the 100 respondents' the data saturation was achieved and acquisition information redundancy was acquired. The 100 sampled population made it possible to undertake a proper case-oriented analysis. These sentiments are agreed to by Bryman (2012:425) as well as Hsieh and Shannon (2005) as cited in Wotela (2017: 236), who indicate that the key in qualitative analysis in the interrogation of empirical information is theme-by-theme and not respondent after respondent.

4.5 Conclusion

In ensuring that the research methodology that was applied and adopted in the study addresses the epistemological and ontological phenomenon the following paradigms in public administration were investigated. The *participatory research paradigm* because the study is addressing societal issues affecting marginalised groups. Furthermore, the data acquired accommodates practice as well as sciences, and the study used multiple methods of data collection. Furthermore, participatory research paradigm adopts and uses the methods that engage humans as well as the actions they perform in their ecological space known as life in the study. The intention is to acquire the process and perspectives that are scientific and practical so that it can benefit both the scientists and practitioners.

The second was the *New Ecological Paradigm (NEP)*, whose focus is on promoting ecological sustainability given the challenges of climate alterations together with contamination of water sources (rivers, dams, and wells) by the inhabitants of towns and cities on the point sources. furthermore, the earth's carrying capacity is being met and the balance of nature is seriously reaching the upset point. The call is for humans to live harmoniously with nature to survive as the earth has limited space and resources. Industrialisation has brought the growth limits that make it important to have plants and animals having to exist harmoniously.

CHAPTER 5: DISCUSSION / PRESENTATION /INTERPRETATION OF FINDINGS

5.1 Introduction

This chapter presents and analyses the data that was collected from the unit of analysis namely: the community members, the community-based organisations, the political parties, and the municipal officials within the Capricorn District Municipality. In this chapter, the research responds to the following research questions:

- What is the origin of the inefficient delivery of clean water and sanitation to the citizens of the Capricorn District Municipality?
- What is the role of the Catchment Management Agencies in the provision of clean water in the Capricorn District Municipality?
- How effective is the cost management system of water conservation and sanitation management?
- How can the supply of water and sanitation to the citizens of the Capricorn District Municipality be improved to ensure efficiency and effectiveness?

The empirical study collected extensive data through the use of an interview guide that was purposively targeting the councilors of different political organisations within the Capricorn District Municipality, the members of the community, the community formations, and the municipal officials. The research design presented in Chapter 4 (Section 4.1.1) shows that the collected data is empirical. The literature review presented in Chapter 2 informed the development of the theoretical and conceptual framework of the research in Chapter 3.

The presentation of the data starts with the presentation of the question from the research questions and objectives, and it is followed by the response as well as the discussion on the response. The reason for utilising this method is to hide the identity of all the respondents as the interview guide was divided between the community members and the officials. To fully protect the identity of the respondents, the sub questions for the investigation will not be analysed individually. The questions in the interview guide were derived from the research's investigative sub

questions. The interviews were conducted face – to – face and some were telephonic.

The research obtained a total of 100 responses from the interviews based on the purposive sampling method and the extended snowball sampling method. The sample embraced the community members, the community formations, the councilors of different political parties and the officials within the district municipality. To protect the information given, the statistics will not be provided on each category of the respondents. The transcribed responses were analysed using NVIVO 12 and Microsoft excel. The chapter composes of tables, graphs, and pie charts in explaining the findings.

5.2 Data management and analysis.

5.2.1 Population count

Table 5.1: Population count

Gender	Count
Male	56
Female	44

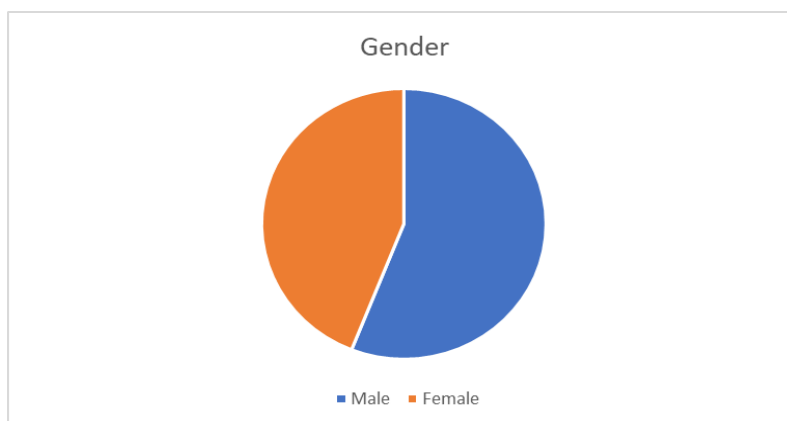


Figure 5.1: Population count

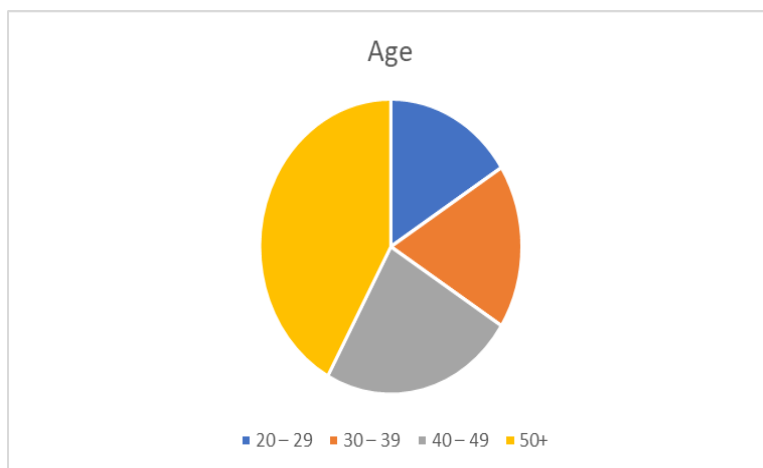
Source: Author 's own work

Table 1 and Figure 4 display that 56% of rthe espondents were males and 44% were females.

5.2.2 Age count

Table 5.2: Age Count

Age	Count
20 – 29	18
30 – 39	16
40 – 49	24
50+	42



Source: Author 's own work

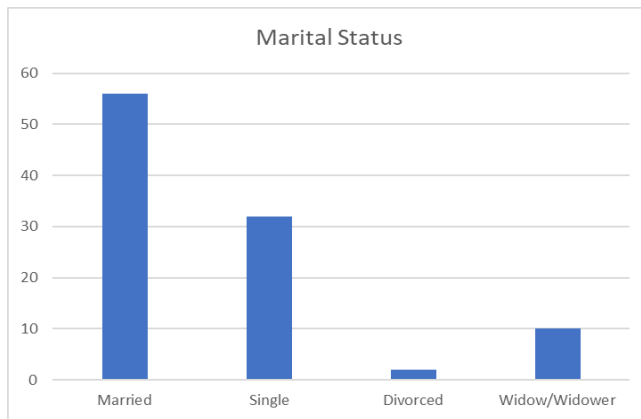
Figure 5.2: Age Count

To get different views of the socio economic dynamics within the district municipality, Table 2 and Figure 5 display the different age groups which were interviewed. The study managed to cover 18% people of between 20 -29 years, 16% of between 30 – 39 years, 24% of between 40 – 49 years and 42% of 50 years and above.

5.2.3 Marital status

Table 5.3: Marital status

Marital status	Count
Married	56
Single	32
Divorced	2
Widows/Widowers	10



Source: Author 's own work

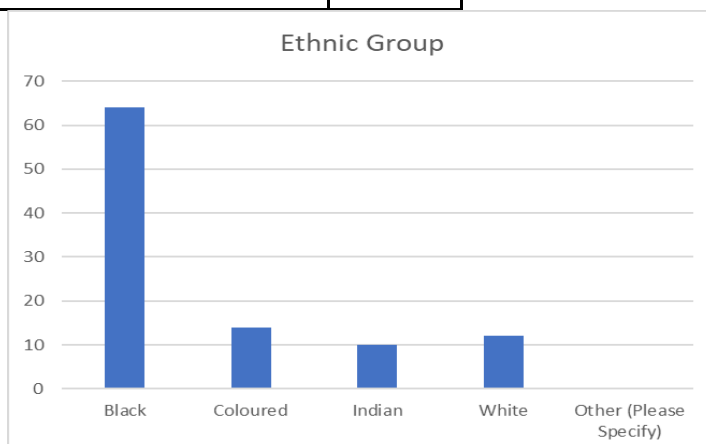
Figure 5.3: Marital status

The study further considered the marital conditions of the respondents as that will provide some insights on the phenomenon being studied. In the process, 56% of the married people responded, 32% of the single people responded, 2% of the divorced population responded and 10% of the widows and widowers responded.

5.2.4 Ethnic group

Table 5.4: Ethnic Group

Ethnic group	Count
Black	64
Coloured	14
Indian	10
White	12
Other (<i>Please Specify</i>)	



Source: Author 's own work

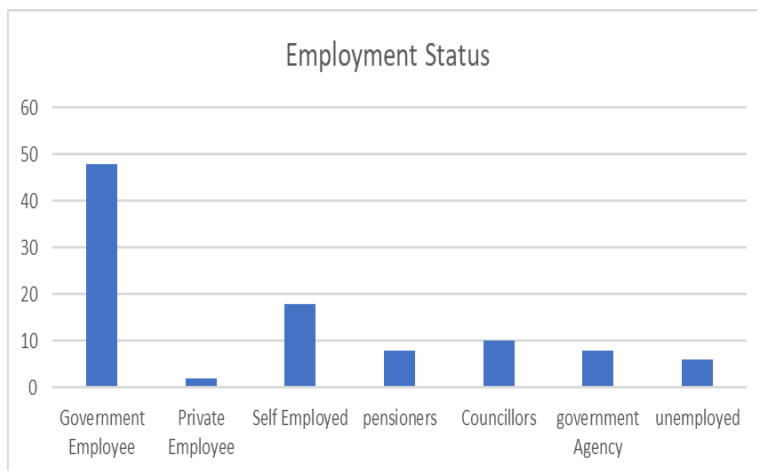
Figure 5.4: Ethnic group

The study considered the population count from all the available ethnic groups in the district so that the outcomes and inputs are from different cultural backgrounds and social settings. Coming from the segregationally locations in South African dwellings, the inputs gave more insight about the phenomenon.

5.2.5 *Employment status*

Table 5.5: Employment status

Employment status	Count
Government employee	48
Private employee	2
Self Employed	18
Pensioners	8
Councillors	10
Government Agency	8
Unemployed	6



Source: Author 's own work

Figure 5.5: Employment status

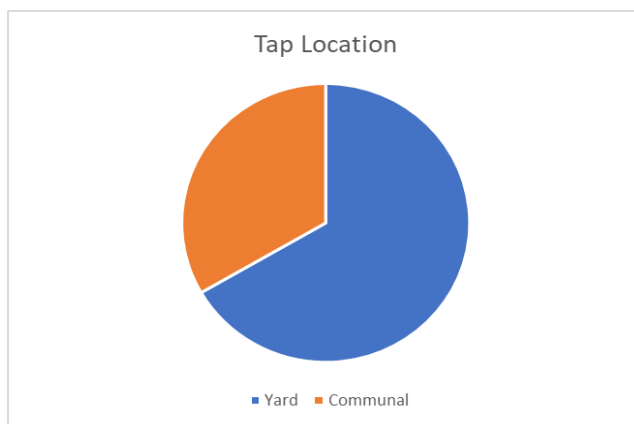
The study interviewed people from different social standings in terms of employment conditions so that the homogenous view of the water and sanitation provision can be avoided. This approach / method helped to get different viewpoints in the way the provision of sustainable water and sanitation affect people in different ways within

the Capricorn District Municipality. The study further discovered that those who only get goods and services on the local sphere of government experience more hardships and are mainly seeking basic needs with no luxuries.

5.2.6 *Water tap location*

Table 5.6: Tap location

Tap location	Percentage
Yard	52
Communal	26



Source: Author 's own work

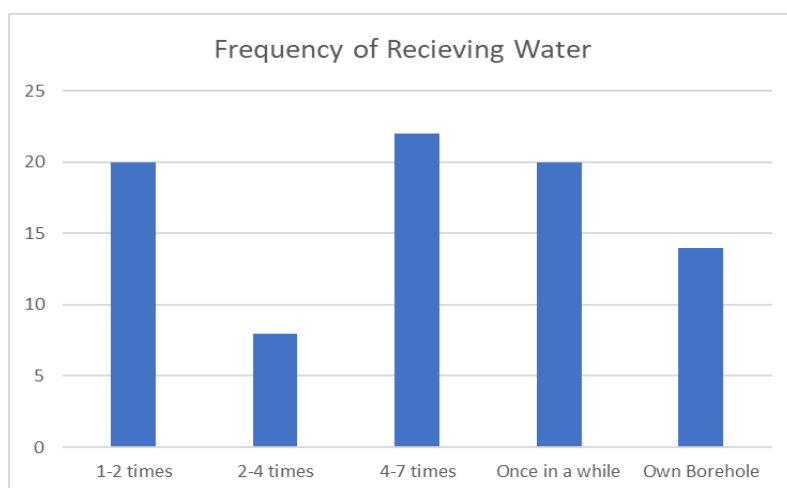
Figure 5.6: Tap location

The study established that there are people who do not have taps in their yards or who are still using the communal taps which were recommended by the RDP standards. It was discovered that 52% of the people in the urban areas and few in the rural areas have water taps in their yards. A total of 26% use communal taps which in most cases do not have water from the municipal supply but are community based with the supply from a borehole.

5.2.7 Frequency of receiving water

Table 5.7: Frequency of receiving water

Frequency of receiving water weekly	Count
1-2 times	20
2-4 times	8
4-7 times	22
Once in a while	20
Own Borehole	14



Source: Author 's own work

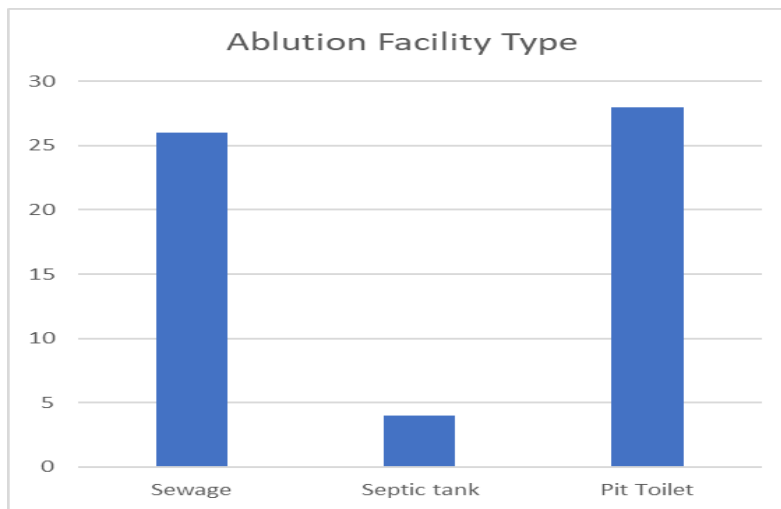
Figure 5.7: Frequency of receiving water

The study discovered that the population which responded did not all have a consistent supply of water daily, 22% responded that they get water at least 4 – 7 times a week. While 20% indicated that they receive water at least 1 – 2 times a week, 8% received water 2 - 7 times weekly and 14% indicated that they have their own boreholes in their yards as that reduced the shortage of water. Most of them come from areas which are part of the 20% which responded that they receive water once in a while.

5.2.8 Ablution facility type

Table 5.8: Ablution facility type

Ablution Facility type	count
Sewage	26
Septic tank	4
Pit toilet	28



Source: Author 's own work

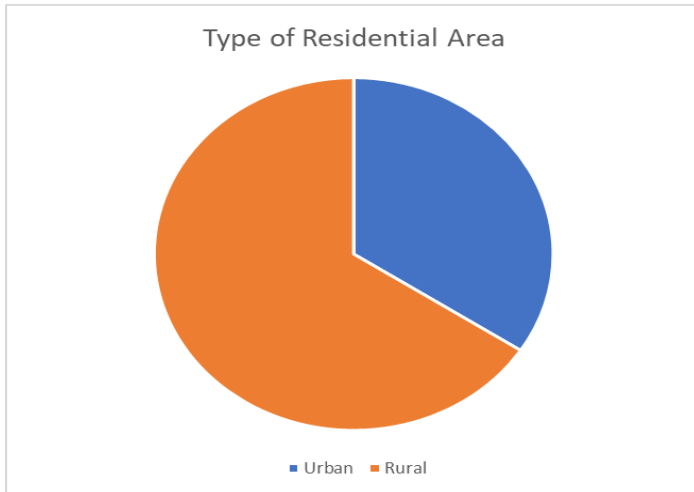
Figure 5.8: Ablution facility type

The study discovered that 26% of the population use sewage infrastructure for their ablution facilities including one village next to Seshego township known as “Mmotong” where a certain portion of the village has the network infrastructure with no consistent water supply. A total of 4% are using septic tanks and these are mostly people with no infrastructure and 28% have pit toilets.

5.2.8 Type of residential area

Table 5.9: Type of residential area

Type of residential area	Count
Urban	26
Rural	50



Source: Author 's own work

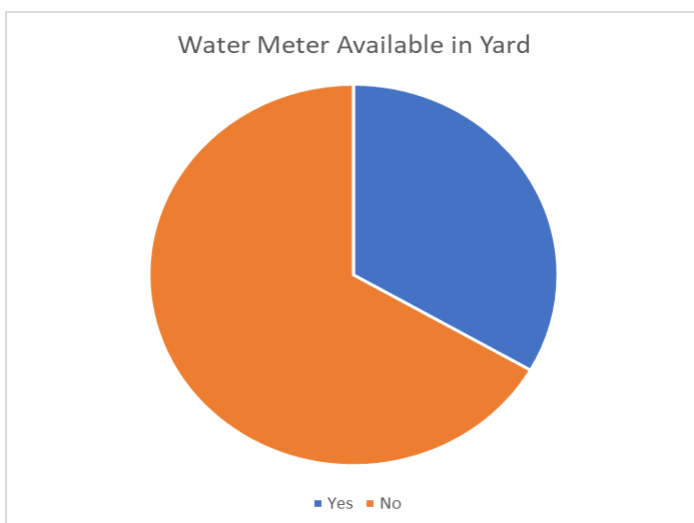
Figure 5.9: Type of residential area

A total of 34% of the respondents were people who live in the urban areas while 66% are in the rural areas.

5.2.9 Water meter available in the yard

Table 5.10: Water meter available in the yard

Water meter availability in yard	Count
Yes	26
No	52



Source: Author 's own work

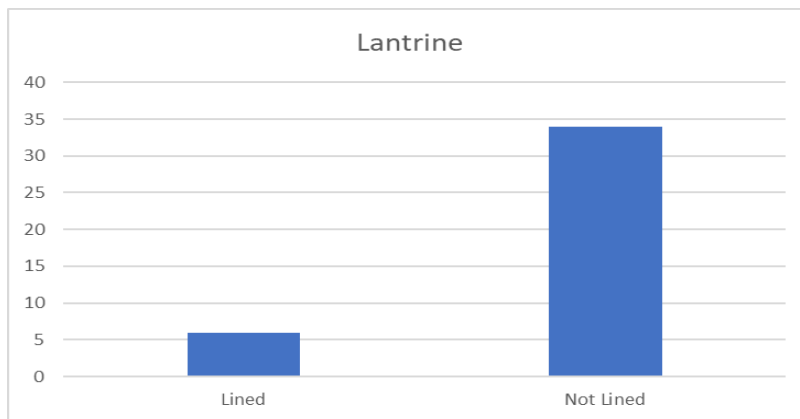
Figure 5.10: Water meter available in the yard

The 33% of the population being studied showed they have water meters available in the yard, while 67% indicated that they do not have water meters available in their yards. In a way this has a bearing on the cost recovery mechanism as there is no measure for water consumption.

5.2.10 Lined and unlined latrines

Table 5.11: Lined and unlined toilets

Latrine	Count
Lined	6
Not Lined	34



Source: Author 's own work

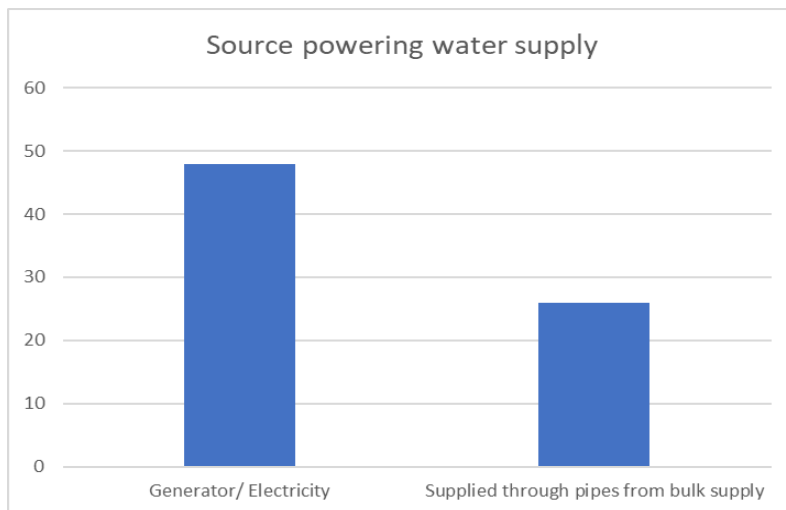
Figure 5.11: Lined and unlined toilets

The study discovered that 15% of the sampled population living in rural areas specified that their toilets were lined because they were supplied by the municipality but they are not drained, once they get full, they dig new ones and mostly they do not get lined. A total of 85% responded that they use unlined toilets as they just dig a hole and build the structure on top. Whether the water table is high or not they do not know.

5.2.12 Source powering water supply

Table 5.12: Source powering water supply

Source powering water supply	Count
Generator/ Electricity	48
Supplied through pipes from bulk supply	26



Source: Author 's own work

Figure 5.12: Source powering water supply

The study discovered that from the respondents, 65% get water from the sources that use electricity or were using generators. Mainly this is not bulk supply through water pipes but it is from the usage of boreholes. There were 35% of the respondents who indicated that they get water through a bulk water supply.

The report of information in this segment is made in accord of the research questions and the research objectives.

Investigation question 1:

- What is the origin of inefficient delivery of clean water and sanitation to the citizens of the Capricorn District Municipality?

Objective 1: To investigate the causes of the poor delivery of clean water and proper sanitation facilities to the citizens of the Capricorn District Municipality.

The respondents from the different avenues indicated that there are different factors that contribute towards the poor water and sanitation service delivery.

The first being **leadership**: In their own words one respondent said, “currently, once a person get elected to a position of mayor, he/she develops to be a human resource practitioner, registered engineer, chartered accountant, social development officer and an advocate of the institutional legal department. That is (*absolutely*) wrong because there is staff to execute those functions”.

The respondent further used the metaphor of a horse, “if the horse is ridden by somebody who knows and experienced on riding it, you will see the way it gallops on the road”. If the department is led by a person who is fully influenced by *politicians, bosses or bishops* not advising them accordingly but pleasing them on their personal interest then the person is not fully equipped to do the job. The current situation tells you, everyday people are marching, “I repeat, every day 24 hours there is a protest somewhere. It tells you the competency of those who are in offices to advice the politicians”.

Planning: Some respondents stated that the problems emanated when the staff was seconded by the Department of Water and Sanitation to the municipalities. The staff was not clearly given the appropriate work to be done in the municipalities. Most of the staff members were above 40 years and upon retirement the district municipality did not have plans to replace those people. Those people were contributing to the staff compliment of between 30 – 40%, on average 35%. This shows you, poor planning in the institution. Some respondents further elaborated that, “the institutional memory or library has burned down”. On a scale of 100 almost 90 of those people are gone.

Some of those people are the ones who know where the infrastructure such as boreholes, water pumps and valves on the supply line are located. This was further proved by the responses from some community members who indicated that some

people around Blood River have built their businesses in the areas where there are municipal boreholes and others fenced those yards and built homes as the area has almost 20 boreholes and only three are equipped. One of the boreholes was not equipped by the municipality to provide people with water, but it was equipped by a political organisation (Economic Freedom Fighters) during the local government campaigns.

This seem to be true because one respondent indicated that the coordinates, they had for boreholes especially in the defunct Aganang municipality were not linked to the boreholes. The solution was to trace the retired Department of Water Affairs staff who worked with those projects to help identify them.

Other respondents showed that the problem of water and sanitation is caused by poor planning which is based on the excitement of issuing tenders and projects of providing infrastructure with *“no proper source of water”*. The respondent further reiterated that, *“tenders were issued and piped laid in most villages, standpipes are installed for community consumption and some people either legally or illegally connected those pipes to their yards, but there is no water. It pains me to know that millions of rands were spent on no water projects”*. The other respondents said *“joo, water from the pipes, ihaah on the trucks yes”*.

One respondent in the Blouberg Municipality in the Sekhung Village said to the researcher, *“there is a tap, it has been there while I was still working in Gauteng, today I am a pensioner being home for eleven years now, water is a commodity that we wish to have in our yards, I grew in Loureshell farm, go there now you will find people chasing donkeys away so that they can access spring water because their boreholes yield salty water”*. Still in the same municipality, one respondent indicated that the reticulation was erected around 2008/9 even today there is no water. The sentiments were supported by one respondent who added that, *“the defunct Aganang municipality now Polokwane municipality was a heaven of making money for contractors. The thing is you cannot build a reticulation before you identify the source”*.

While busy probing for further explanations, ten respondents in different words indicated that there is Glen Alpine and the Nandoni dam just around them. All what is needed is to erect a 104 km pipeline from Nandoni to Soekmekaar that will serve the Eastern part of Botlokwa or a 110 km pipeline from Glen Alpine to Mogwadi town.

Thirdly, **illegal catchments**: The respondents indicated that, the key historical problems of sustainable water and sanitation is the fact that most villages depend on dry streams, ineffective boreholes drilled to mostly exhort money from the struggling municipalities and illegal catchment as well as illegal dams. The respondent indicated that, the irrigation farmers blocked / built their own space, and this is the cause of drying in the rivers and streams. “It is the responsibility of government to open such illegal acts and open up the space of sabotage to the democratic government”.

The other respondent specified that, “where Limpopo River starts there are lot of diversions to the farms along that stream to those illegal catchments / dams. looking at the river up to Blouberg via Mogalakwena you will find everything in that fashion. Lately there is a court case which is not moving to open those illegal dams or catchments”. The respondent further asked the researcher to make a follow-up with the Department of Water Affairs in the province of Limpopo about this matter. The question to be asked by the researcher as structured by the respondent is, “*when is the case sitting regarding the demolition of illegal infrastructure built by irrigation farmers*”. The researcher did not make a follow-up on this matter because the study is not investigative in nature.

The other respondent on this matter indicated that, they call this process the “**biggest heist of water**”. The respondent further outlined that the problem affected the practice ‘*focus*’ in the western part of the Limpopo province. In verbatim, the respondent said, “go to the nearest village which has rivers such as Ga Dikgale, the area is dry. If you have a means drive back through the river which leads you to Makgoba’s Kloof and have an appointment with one former MEC in Limpopo provincial government to go and view the area. The first thing you see is the big illegal catchment adjacent to his house within the mountains of Makgoba’s kloof. Water streams going to the people were closed. The water flowing from the

mountain to the western part serving the Makgoba and Dikgale people is to date dry because of this illegal catchment”.

While the researcher was busy gathering information, the respondent phoned an experienced retired veteran who worked in the water affairs to come to help and clarify some facts. In the response the veteran indicated that, “on the Eastern part there is Makgobaskloof dam, Erbenezer Dam and Dam Naude’, go and check their levels, you will realise a discrepancy between them and other dams that supply the masses such as Tzaneen Dam. The levels of the three dams are always almost full, ask yourself why. Those dams that serves the Agrarian farmers are always full to the capacity”. This shows that what the researcher asked about water licensing has been abused by the farmers who are not blacks. The respondent further gave a typical example on the Dendron Road to Mogwadi Town indicating that, when travelling on that road after the Rita Mountain, the big hill seen on the side of the road is an illegal catchment that needs to be abolished in this democratic dispensation.

5.1.1.1 Sanitation

On the issue of sanitation, the respondents indicated that the incompetency level experienced in the water and sanitation sector desires to be solved by ensuring that the engineers must be on site more often to witness the problems on the wastewater treatment plants and they must avoid depending on the reports from the consultants. Their responsibility must be to report on what they are told on paper. Failure to have them on site, the municipalities are going nowhere.

The other respondents indicated that, there is a need to start at ‘ground zero’. “As I speak not going far, in Polokwane town at a place called Serala View, people do not have water, the French toilet system is ineffective. *People relieve themselves in buckets*. In the rural areas, *‘rural development which is spoken about daily is not done’*. After 29 years of this government in the country there is a need to go back to basics, start afresh with planning for the people and avoid lining the individuals’ pockets. One of the solutions is to do away with tendering but consider upskilling the existing graduates followed by prioritization of solving the problems”.

5.1.1.2 *Staff appointment*

The nine respondents indicated that staff appointment is a grave concern because people are appointed not only on what they possess as skills and qualifications, but they are appointed on what will they do for the sitting leader. Some politician said, “we appoint staff which is not suitable to the institution but suitable to us as politicians”. The respondent further alluded that, *“if you appoint me as a manager without relevant qualifications such as Public Administration in the position of leadership or manager, I will never appoint somebody higher than me with qualifications because he will undermine me”*. In essence, there is an inferiority complex for most managers in appointing skilled and educated people who might be seen as a threat when the contract expires after five years for the manager. “I will always appoint the weaker and that speaks for itself”.

A distinct view was raised by one respondent who revealed that people are appointed with the required qualifications and competency but are corrupted by the system. “The contractors are the main culprits here; they do not do their job accordingly and later bribe the officials who are supposed to do the inspections. A poor official who is broke at the time with no money for petrol end up succumbing to the illicit practice which has long negative consequences to our people”.

On the operational level, the respondents echoed that, *“there is a serious problem and a serious struggle because there are no operators, and the model is problematic in terms of costs. If care is not given to the current system, there shall be more operational costs than service delivery costs”*.

Another challenging area regarding staff is the **pump operators**, almost 20 respondents indicated that *the pump operators should be insourced or absorbed into the municipality so that they can be accountable to the institution of governance if there is no service delivery*. In further motivating the requirements of the operators, the respondent indicated that a young person needs to be appointed in the rural areas because their water supply is of a surviving mode. A young person who is energetic and active will help close valves to supply different areas daily. The other respondent indicated that one employee refused to pump water because the

municipality did not provide him with the pump, he needs at Molemole. At Refiloe village one respondent said, *'it seems when the municipality require pump operators, they go to the beer hall and recruit from there as in our area the pump operator will sometimes pump for just five minutes in a day'*.

5.1.1.3 Operation and maintenance

Some respondents indicated that the maintenance is bad because there is no preventative maintenance both in the water supply and in the sanitation services. Fixing is done only when there is something broken. There are no resources to take something for service because it is due. There is a need to develop the score cards on contractors who are doing preventative maintenance or who are ensuring that the municipal employees who are internally employed are the ones responsible for things such as oil change, and filter changes to avoid paying a lot of money to contractors to fix what could have been avoided.

Currently, the allocated money does not fix but it develops a new project, and *'this does not take care of infrastructure longevity in the district municipality'*. In 2013, a functionality assessment of the entire municipal infrastructure was conducted including the handed over infrastructure from the Department of Water Affairs. At that time, a thorough maintenance plan was developed with the value of the replacement cost and budgeting was done at roughly 15% of the cost.

Some respondents indicated that after an audit of assets was done post handing over from the DWAF to the district municipality, the outcome indicated that the municipal asset value was almost two billion and the normal practice required that the maintenance budget be between 8 – 10% of the asset value. The 15% which was allocated at the time was informed by the engineers' recommendations that there is a need to upgrade the ageing infrastructure. Currently, the best practices operation and maintenance budget is taking a nosedive annually at 1% of the total asset value while the budget for infrastructure is going up.

5.2.11 Investigation question 2

How is the state of the Catchment Management Agencies (CMA) in the provision of clean water within the district?

- How is the maintenance of infrastructure currently given the increasing demand of water due to the population growth?

Objective 2: To examine the role of the CCMA in the provision of clean municipal water.

The respondents from the different avenues indicated that the management is unstable, and the human resources are full of acting people, especially the top management. There is mostly no permanent person hired / appointed in those positions. For instance, there was an acting Chief Executive Officer (CEO), and an acting Chief Financial officer (CFO). In essence, there *'are people there but not really there'*. This situation made people or anyone in the position to do what they want to avoid responsibility, and they would be replaced with another person once the objective of self-enrichment has been achieved.

Two respondents further added that: "it is not easy to answer the question further from the *infra* answer because they are not sure of the actual mandate of the management agency. If they knew the actual mandate, they would give an appropriate answer but when one resume responsibility of something it should be full responsibility. Looking at the situation one would say, 'there is bad management in the institution because they are not doing what they are supposed to be doing, thus, there is ignorance of not doing or taking full responsibility of their work'. In this instance the obvious mandate is the provision of clean water to the people of Capricorn District Municipality".

The *infra* paragraph is supported by the sentiments of the Polokwane Mayor who indicated through Molefe (2022) in News 24 that the failure of providing sufficient water by the Lepelle Nothern Water due to load shedding will result in penalising the agency for lack of delivery. The failure to purchase the generators for backup will imply that the municipality should purchase such for them to ensure the mandate of serving the residents is met because the Municipality is up to date in paying for the services which the people do not get effectively. The money to be utilised will be deducted from the monthly payments done to the Agency's invoices.

On a different response, another respondent said “management is good, they know what they are doing in providing clean water. The problem is the capacity output as they are not reaching their intended outcomes. For instance, instead of providing 100% they provide 10%. The water quality is good but not sufficient and do not reach the expected outcome”.

The other respondent indicated that the water is quality, but it is not sufficient, instead of giving ten people water they give only one. In supplementing the sentiments, one said, ‘Lepelle Northern Water is supposed as per contract to supply Polokwane with 287 megaliters but it doesn’t and in winter it is worse as they do not even reach 200 megaliters’. The figure as given by the respondents seem to differ with what was reported by Molefe (2022), “Northern water has a contractual obligation to supply 59 megaliters of water to Polokwane and surrounds”. In further reporting, there is a similarity of the noncompliance to the contractual obligation as the Municipality intends to withhold the monthly payment of 26 million Rands per month to Lepelle Northern Water so that they be obliged to deliver as per mandate.

The respondents further indicated that Lepelle Northern Water has clean good quality water supply reaching the blue drop status but not fulfilling the mandate. This is proved by the supply which is witnessed around Polokwane where most parts of the city are without water most of the days. The sentiments of the respondents were supported by Molefe (2022) reporting on News 24 after community consultation by the Mayor of Polokwane on the shortage of water supply for more than seven weeks due to system failures in the Olifantspoort and Ebenezer main water plants for Lepelle Northern water.

Once the person is replaced, the new one comes with a different administration, once the seat gets hot, they move back, and a new incumbent comes in with a different administration / management type. This mostly happens within the space of a year.

This affects the projects as some are abandoned and a new start is implemented at a hefty and costly processes. For example, a package plant was erected, finished, and closed. Now it is a white elephant. The other example is the construction of a

sludge lagoon in another plant, every administration starts afresh when they come into power. Some structures started in 2018 and in 2022 they are still not finished and not regenerating money for the institution.

5.1.1.4 Maintenance

The supply of water to the Capricorn District Municipality is not well maintained more especially from the Urbenezer Dam via Mankweng to Polokwane and Olifantspoort from the Lebowakgomo site where some of the pump stations are vandalised and nobody is doing anything about them. This results in the security bridge as the management agency knows about it and does not do anything with the situation. According to the right order, when a pump station is vandalised, or damaged maintenance should immediately attend to it without procrastination to make sure that it is not by-passed. *“Given the acting nature of the management this becomes the acting outcomes of the management style applied”*.

The other respondents indicated that the maintenance is bad / horrible because the plants are not maintained as they should be. The valves / water pumps always break down, and ultimately there is a lot of water that is lost due to the leakages that are caused by the ageing infrastructure. The other contributing factor is the unavailability of drawings and floor plans of the infrastructure. In a way, the confusion is about whether the breakages are due to poor workmanship or old infrastructure.

The other respondent further indicated that, ‘we might be blaming the current board and leadership, but the problem is not only them, but it also emanated from the handing over process from Department of Water Affairs (DWS) to the management agencies as the process was not smooth. Now Lepelle Northern Water does not know where the assets are sitting or passing because there was no proper handing over more especially on plans and infrastructure’.

5.1.1.5 Resources

The respondents unanimously indicated that there is a need to restructure the whole institution and investigate the employee costs because a lot of money goes to the salary bill. Some respondents further stated that, the procurement department needs to be closely monitored because most of the problems emanate from there. *“Look at*

what they do, it is good but not sufficient, their budget is for the entire population, but it is not used to fulfil what they are supposed to". The other respondent indicated that 'if getting a loan was service delivery, the Management agency will be one of the best as it gets money which is not used for the intended purpose'. Furthermore, 'there is high level of misappropriation of funds".

The respondent further indicated that to protect the identity, the researcher should not name the project where almost 22 million Rands were spent with suppliers paid and all the transactions done according to the book, but the actual groundwork shows that only 10 million was spent.

5.1.1.6 *Function of the board*

The respondents indicated that, 'at a point you ask yourself if really there is a board when these things are happening. Maybe, the board is coerced into these processes, and they are part of the confusion that, is the reason the institution is being run like a syndicate'. The other respondents said, "*yes, on the books they have a board, do not forget that the board is composed largely of politicians who are just executing the mandate of a cartel*". The functionality of the board is questioned when the local Mayor of Polokwane indicated that due to the failure of providing sufficient water to the populace, "*we are taking a route that says let's work together, but obviously it doesn't mean we don't have a limit in terms of our patience. They need to deliver water uninterrupted and consistent without fail, and we will pay them without fail*" (Molefe, 2022).

5.1.1.7 *Service improvement*

The respondents indicated in different terms that before any service improvement is done, the footprint needs to be looked at closely. For instance, in South Africa, the people work for their own benefit not for the country. Some indicated that the first thing will be to fire the board but bringing in new people will not help if the government is still as it is now. "It's getting bad every year". Let's look at the Lepelle Northern Water, there is a new board, new staff (relatively new) climbing on a bad vehicle'. One of the respondents further said, "*the solution is decreasing the budget as there are lot of millions which are misappropriated. If the budget is decreased*

there will be no chance to steal the money. Replacing the people will not really work”.

The respondents further indicated that, the management is unstable, and the human resources are full of acting people on the structures especially in top management. There is mostly no permanent person hired / appointed in those positions.

The respondents further indicated that maintenance is bad / horrible because the plants are not maintained as they should be. The valves / water pumps always break down, ultimately there is a lot of water lost due to leakages caused by ageing infrastructure. The other contributing factor is the unavailability of drawings and floor plans of the infrastructure. In a way the confusion is as to whether the breakages are due to poor workmanship or old infrastructure.

Furthermore, there is a need to restructure the whole institution, and to investigate the employee costs because a lot of money goes to the salary bill. Some respondents further stated that, the procurement department needs to be closely monitored because most of the problems emanate from there. *“Look at what they do it is good but not sufficient, their budget is for the entire population, but they are not used to fulfil what they are supposed to”.* The other respondents indicated that ‘if getting a loan was service delivery, the management agency will be one of the best as it gets money which is not used for the intended purpose. Furthermore, there is a high level of misappropriation of funds.

The respondents gave an example of a project where almost 22 million rands was spent with suppliers paid and all transactions done according to the book, but the actual groundwork shows only 10 million was spend.

The respondents further said, ‘at a point you ask yourself if really there is a board when these things are happening. Maybe, the board is coerced into these processes, and they are part of the confusion that, is the reason the institution is being run like a syndicate’. The other respondents said, “yes, on the books they have a board, do not forget that the board is composed largely of politicians who are just executing the mandate of a cartel”.

The respondents indicated that to improve service delivery “the solution is decreasing the budget as there are lot of millions which are misappropriated. If the budget is decreased there will be no chance to steal the money. Replacing the people will not really work”.

5.2.12 Investigation question 3

How effective is the cost management system of water conservation and sanitation management?

- **Objective 3:** To evaluate the effectiveness of the cost management systems of water conservation and sanitation management.

The respondents indicated that it is not easy to have a proper cost management system implemented in the district because in areas where the meters are installed people do not pay. In the Mankweng area, some respondents indicated that people chose to by-pass meters in their yards so that they always get free water. Even in some townships such as in Lebowakgomo, Dendron and Blouberg, some people choose not to pay for water including some government departments. The proof of the sentiments was echoed by one respondent who indicated that the district collection does not even reach 50%.

One of the reasons for the low collection and nonpayment is the inconsistent supply of water by the municipalities and there is no water in most high lying areas where some portion of the low laying area receives water. Consequently, the people see no reason for paying what they do not receive and those who receive the service argue that some people do not pay so they cannot be the ones to pay while others get a free ride.

Some respondents indicated that, people made peace with the fact that they do not have water. The only payment they can do is to the private water supply by people with bakkies and donkey chards not the non-servicing government which looks at its own leaders not the masses. If the municipality can ensure regular access to water and embark on roadshows tutoring people, the importance of paying for services with no record of corruption amongst the administration, the people will regain confidence of their government and pay for the services so that they can be

sustainable. *“Now if you tell people to pay is like you say, finance corruption”. ‘It is difficult for us as community leaders to convince people to pay for the services which we cannot see’.*

In the Molemole Municipality, the project of installing meters was hijacked by political squabbles which had nothing to do with the municipality. Some respondents indicated that they are not going to accept the pre-paid meters as that is going to make their water more expensive. Some of the people indicated that they used to pay but now they no longer paying because most of the people do not pay. Amongst the people who complained about water payments were some pensioners who seemed not to know anything about the indigent’s benefits offered by the municipality.

In the rural areas of the district, most respondents indicated that sanitation is a dream for now and it is secondary. The primary requirement is water, sanitation is as it used to be for the majority and those who can afford use septic tanks as they have boreholes in their yards.

5.2.13 Investigation question 4

How can the supply of water and sanitation to the citizens of the Capricorn District Municipality be improved, to ensure efficiency and effectiveness?

- **Objective 4:** To probe how water and sanitation can be improved and supplied effectively and efficiently to the citizens of the Capricorn District Municipality.

The respondents differed according to the locality, those in the rural areas were concerned about receiving water irrespective of the source. The concern was more on boreholes as a quick solution than the bulk supply which they witnessed as the supply of standpipes and equipping the ground with pipes with no water at the end of the project. Those in the urban areas were concerned with the shortage of consistent supply and water with low pressure in the houses especially in the morning when everybody must bath.

On sanitation, the respondents in the rural areas raised a concern that their primary focus is water. Whether the toilet is lined or not is immaterial, *“long as we have a pit*

toilet, we are fine, it is our wish to have toilets in the houses for security but that is not possible because we do not have appropriate and reliable supply of water”.

Some respondents with boreholes stated that they are having septic tanks which are not drained by the municipality, but they must call the private service providers to drain them. *‘If the municipality comes to drain for me, it comes at a fee which I pay, it is not a free service’.* Some indicated that their septic tanks are not drained as they have two rooms, the first being inflow from the house and second is filled with stones and effluent to sip back into the environment without taking the smell back to the house. In a way the system contaminates the ground water as the effluent enters the environment underground.

Some respondents indicated that they use septic tanks at the community halls without pressure pumps and that is chaotic because the water takes time to fill the cistern in the toilet, ‘when people are many ‘we end up with blockages and to repair them takes time as it is subjected to municipal procurement processes.

5.1.1.8 Solution to the water problem

A concern was raised that areas such as Polokwane need to supply their own water and not depend on Lepelle Northern Water as they proved not to have capacity with the huge budgets given annually. *‘Infrastructure needs to be taken away from Lepelle Northern water and the municipality maintain it themselves’.* The respondent further said, *“now Lepelle Northern Water has acquired a loan of almost 4.5 billion rands for infrastructure, the expectation is to have the money wasted and disappear ultimately”.*

The respondent further elaborated by giving Tshwane as an example which took over some infrastructure and within a short period acquired partners who invested and built more reservoirs. The respondents further indicated that there is a need to have schemes in the district to work properly as they might help with more reservoirs and avoid boreholes which are expensive to run due to high electricity tariffs. As a short-term solution, the boreholes around the areas might be a workable intermediary solution due to the demolition of infrastructure and the theft which is being experienced by the municipalities.

The municipalities need to have a proper reservoir maintenance with pipes running in the right direction and they must allocate an appropriate wear and tear maintenance budget with skillful personnel to do basic maintenance than solely depend on consultants for things such as removing a filter, changing of oil and basic operation and maintenance.

The other respondent further reiterated on what the previous respondent highlighted and said, *'there is a dire need to implement a system that will manage water losses in all the areas from both the supplier to the reservoir and from the reservoir to the people'*. The respondents further indicated that, when a pipe burst, they cannot close the valve as they do not know where it is located. All they do is to shut down the main hole valve instead of a localised area.

Given Appendix F, as released by the Polokwane Municipality on the 15th of July 2022 with the titled update: Olifants supply stoppage, the respondents seemed to be right in their sentiments because the opening paragraph of the notice stated that *'the latest information from Lepelle Northern Water is that due to bad state of the leaking pipe we need to cut and replace it with another piece'*. The notice further indicated the areas that will not receive water and those that will have low pressure supply.

5.1.1.9 General question asked to all the respondents.

The researcher requested those who can write to fill this answer on the interview guide so that the respondents can give their honest opinion. No further probing question was asked once the answer was given. Those who could not write in English were requested to write in their vernacular. Some respondents requested that their opinion be recorded as it was done throughout the interviewing process. The respondents were not obliged in any way to respond if they were not comfortable to do so. Some did not respond to the question posed.

5.3.4.2.1 In your opinion, how do you think these services can be improved?

- *"By installing taps in every yard and give us flushing toilets.*

- Municipalities must be accountable to their communities through regular consultation.
- Provide all services on time.
- They must try to give us water daily.
- All communities must be given enviroloo because it will help the communities with hygiene loss.
- The people who are responsible for the service delivery must visit the villages or communities to see how they can improve the services.
- They must provide electricity to pump water and move away from the generator.
- Every yard should have its water tap and water tanks be increased.
- Provide purification of the water as some boreholes in the village are near the graveyards, these might breed cholera if it rains heavily and there is an underground spillage to the water table.
- Pump operators should be young people who will ensure that water is provided / pumped daily on intervals to different areas more especially when people are going and coming back from work. These will help avoid getting water only on Tuesdays and the whole village share per hour on rotational basis for seven hours a day.
- With the current leadership in local government / municipalities, I do not foresee anything in the next ten years.
- Municipality should allow access to water and challenge the commercial farmers blocking of the streams and open illegal catchments.
- Municipality will not do anything on toilets due to leadership.
- People extended yards and no consequences. This inhibited space for trucks to drain toilets when full. People extended their yards to increase rooms without municipal permission.
- The pump operator needs to be changed because when he is drunk, he does not pump the water.
- Need to develop infrastructure.
- Need to improve on operation and maintenance. Spend on projects delivery and not on corrupt activities, Lepelle Northern Water should stick to its 287 mega liters of supply as it cannot reach 200 mega liters recently some of the

reasons being loss of water due to theft, vandalism, illegal tapping of connections on the main pipe and of course organized corruption by the acting members on the organogram of the institution headed by the procurement processes with the board watching.

- Ensure that at the end of the project there is water coming out of the taps, provide improved ventilated toilet in the rural areas to improve hygiene more especially for avoiding underground contamination.
- Monitor and do lifestyle audit for municipal staff members more especially those in supply chain and all those involved in the project including ward committees.
- To sustain the projects, need to provide pre-paid metering system and provide education to the people on water and sanitation.
- Cancel all trucks providing water and turn that water into pipes or put-up temporary tanks that will be filled instead of running in the townships and villages for accumulating more kilometers while people are at work and no water is given to the majority.
- Must have taps in our yards with continuous water supply so that those who can afford should erect septic tanks which later will be converted to sewage reticulation.
- The municipality is always not available.
- Improve on leakages and encourage people to fix the yard water.
- By employing new, young, and active brains that understand real challenges the community faces.
- By additional water tank supply, we have many boreholes not functioning, please come and meet CDW, ward councillor and municipality rep, we need service of bore machine, steel tank, fencing the machine and borehole.
- By making sure that they purify water because the water is salty.
- To supply water to the community every time there is a need.
- They must just fulfill their promises and deliver community services.
- Supplying more water tanks per main street.
- Municipalities in the rural areas must install meter reading for people to have access of running water and introduce flushing toilet.
- Everyone must have access to clean water and toilet must use water.

- To communicate with the affected communities to hear their needs.
- Improve by providing water in the morning.
- Services can only be improved if the municipality can have enough boreholes so that the community can have enough water supply”.

5.3 Research results

This part will give an analysis of the themes as raised by the respondents in answering the objectives and the research questions of the study.

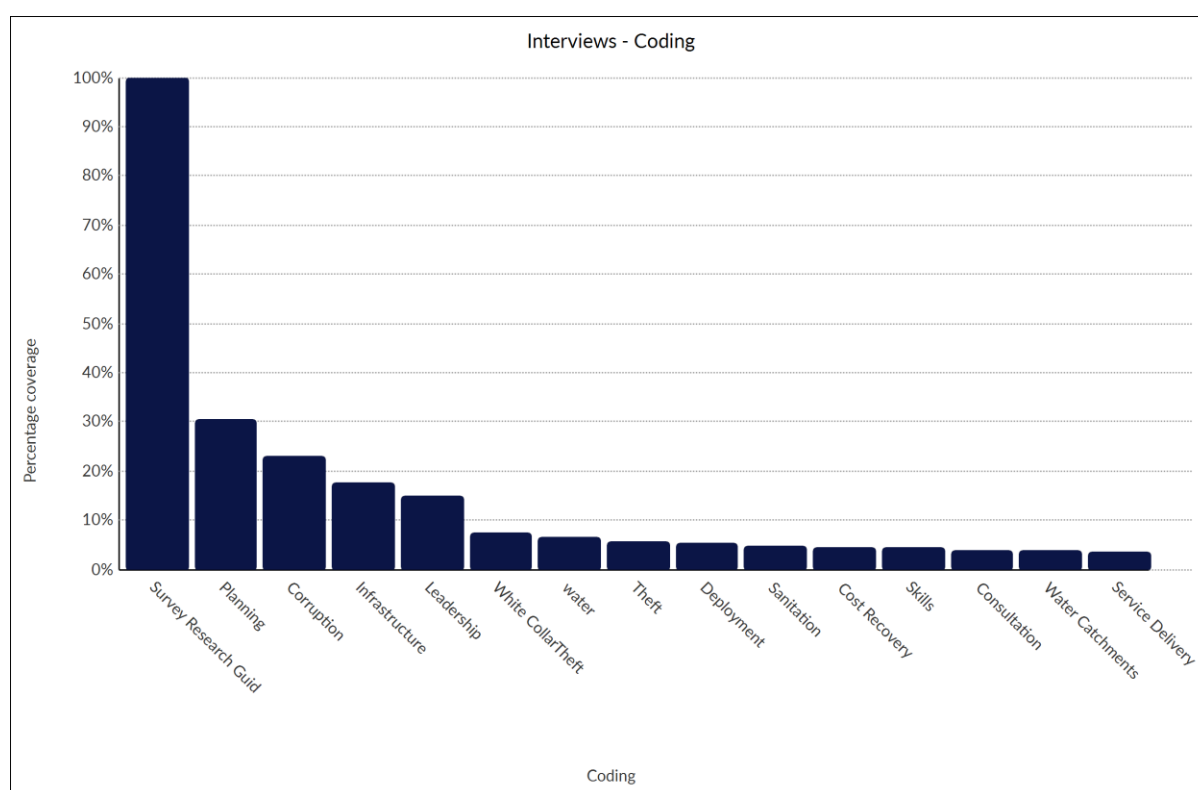
Table 5.13: Respondent's summary

Name	Respondents' summary
Consultation	Need to teach people the importance of paying for services.
Corruption	<i>As community leaders “if you tell people to pay is like you say, finance corruption” and “With the current leadership in local government / municipalities, I do not foresee anything in the next ten years”.</i>
Cost recovery	Intensive consultation to avoid a culture of non-payment.
Infrastructure	Ageing infrastructure not serviced as there is no sufficient budget
Leadership	Leaders position themselves to have proximity to resources and formulate cartels within local municipalities and the district.
Planning	Done to drain municipal resources and line up individuals' pockets
Sanitation	In a state of decay due to poor planning and unskilled personnel
Service Delivery	Promised during campaigns but a smoke pipe that disappears after council appointments
Skills	Priority given to the campaigners with no appropriate skills
Deployment	“In most departments the whole operational stratum is politically corrupted leading to low productivity as a result of shortage of skills”.
Theft	<i>‘Theft is rife because people see an opportunity to fill their stomach not looking at the long-term replication to the municipality’</i>
White Collar Theft	Ineffective boreholes drilled to mostly extort money from the struggling municipalities and commodify water supply through water trucks.

Name	Respondents' summary
Sanitation	Most of the toilets are not lined and the septic tanks are not drained and their effluent sip into the ground
Water	The fact that water is regarded as a scarce resource made it to be a 'jewel' and an expensive commodity, everything associated to it was made expensive influenced by politicians and deployed officials
Water Catchments	There are illegal catchments that need to be abolished and boards are full of cartels that do not solve the problems of water supply.

Source: Author 's own work

Figure 5.13: Themes acquired and developed during interviews.



Source: Author 's own work

Figure 5.14: Themes acquired and developed from interviews.

5.3.1 Consultation

In an attempt to provide solution to the culture of nonpayment, the respondents indicated that if the municipality can ensure regular access to water and embark on roadshows teaching people, the importance of paying for services such as water and sanitation with the help of local ward committees if properly elected and not imposed,

with no record of corruption amongst the administration, the people will regain confidence of their government and pay for the services so that they be sustainable. *“Now if you tell people to pay is like you say, finance corruption”. ‘It is difficult for us as community leaders to convince people to pay for the services which we cannot see’.*

According to President Cyril Ramaphosa when closing the ANC’s 6th National policy conference, an emphasis was made that *“an agreement was reached that every person in this country must, without exception, have access to quality education, decent health care, housing, water, sanitation, electricity and safe, reliable transport”*. Furthermore, he indicated that, *“there is a need to fundamentally overhaul local government, ensure that it is properly resourced, effectively managed and led by honest, capable and committed people”* (Ramaphosa. 2022).

While collecting data, the researcher observed an unpleasant situation where the District Municipality Mayor was consulting the residents of the Molemole Municipality launching pre-paid water meters, but the meeting could not go on because it was hijacked by political squabbles which had nothing to do with the subject under discussion by members of the community belonging to some political organisation. Without listening to the presentations, some people had pre – conceived solutions that they are not going to accept the pre-paid meters as that is going to make their water more expensive. This consultation was in line with what some of the respondents said, *“to sustain the projects, there is a need to provide pre-paid metering system and provide education to the people on water and sanitation”, Municipalities must be accountable to their communities through regular consultation and the people who are responsible for the service delivery must visit the villages or communities to see how they can improve the services”*.

A different view was observed when the respondent indicated that, *“the municipality is always not available, and it should Improve on leakages and encourage people to fix the yard water”*. This process of encouraging people will be effective through consultation processes not only during the IDPs but even during the ward committees’ consultative meetings if they are conducted accordingly.

The study has observed that consultation is vital because it will ensure that the programs of the municipality are improved, and they may eradicate some perceptions of the people such as those who during the data collection indicated that 'they used to pay but now they no longer pay because most of the people do not pay'. Consultation will further assist some people to understand their rights and benefits because the study discovered that amongst the people who complained about water payments were some pensioners who seemed not to know anything about the indigent's benefits offered by the municipality on water and sanitation.

Looking at what the respondents said about unknown infrastructure, it is vital that the municipality should take advantage of the consultative processes in discovering where some of the infrastructure such as boreholes are located within the villages. *"We have many boreholes not functioning, please come and meet CDW, ward councilor and municipality rep, we need service of bore machine, steel tank and fencing the machine"*. Furthermore, there is a need *"to communicate with the affected communities to hear their needs"*.

According to the ruling party, policy conference resolution consultation is imperative as espoused by the following words, "our machinery in the ANC must be able to respond to community challenges and engage with the people and deliver good government, we need to develop members and leaders with skills and governance capacity" (ANC, 2022:23).

mm

5.3.2 Corruption

The respondents on this phenomenon were highly emotional and indicated that, *"With the current leadership in local government / municipalities, I do not foresee anything in the next ten years"*. The respondents further indicated that corruption has manifested itself in different ways, such as in employing people with a shortage of skills, cadre deployment and white-collar crime.

The sentiments are also acknowledged in the 6th ANC National Policy conference report indicating that, during the local government elections of 2021 the voters made it clear that they have lost patience with the politicians, as well as the government, and the promises made by the ruling party to improve services and clean up

corruption. People are disillusioned with the ethics of many *“ANC leaders as self-serving looters and parasites that live off the state and care little for their hardship”*. The resolution further intended to focus on the needs of the people and cleanse any manifestations of corruption, nepotism, wasted expenditure, deployment of incompetent public servants and the tolerance of non-delivery (ANC, 2022:23).

The sentiments seem to correlate with the report published in journal transformation as summarised in the Mail and Guardian by Kings (2020) indicating that the state capture in the department of water affairs happened in two phases. “The first, in the 1990s and 2000s, came in three main thrusts: securing control over the department, weakening its oversight capacity, centralising control and then weakening legislation”.

This element was also highlighted by former President Thabo Mbeki who indicated that the behavior of some members in the ruling party within the municipalities has contributed towards the downward spiral of votes more especially those who are implicated in graft (Madubela, 2021). The voters stood back because ‘they cannot vote for people who steal their money, people who cannot implement the manifesto end up perceived as liars and there is a need to avoid transferring governance problems to the populace / voters’. He further emphasised that, most of the people who are interested in leadership positions are not interested in policy implementation but proximity to resources. This eventually results in local municipalities being too weak to deliver services as the ruling party has degenerated in membership (Madubela, 2021).

In attempting to rescue the failure of local government, a **district model** which cannot flourish under corruption has been introduced and it needs to be achieved through the help of a **‘comprehensive social compact’** that needs social partners to engage one another and solve the triple challenges and develop a common objective of eradicating poverty, unemployment experienced by the municipalities at large and ‘government in particular’. The common objective should be to have the country as a winner ‘not individual social partners’ because fights cause a failure to the model (Ndzendze, 2021).

The study by Bovaird and Loeffler (2009:398) as cited in Maqoko, Asmah and Andoh (2019:70) stated that there should be an avoidance of being pre-occupied with gaining a dominant position in policymaking by politicians and appointed officials, the two should exercise authority along with other actors, including the private sector and citizens in taking decisions that will improve the socio – political conditions. In ensuring the comprehensive social compact as stated earlier, a study by Pretorius (2017:212) emphasised that the public servants, as well as the municipal administrative officials, must be impartial in implementing government policies, programs, and projects.

The sentiments as said by the respondents seem to concur with what was discovered in transdisciplinary research titled: **Perspectives from below on Emfuleni 's wastewater woes: in search of resolving a wicked problem**. The respondents and findings indicated that corruption needs to be dealt with so that proper governance and trust amongst residents can be regained. One of the worst behaviors that was displayed is the attitude displayed by the “politicians and officials who assume that they do not act in an accountable manner”. Furthermore, the findings indicated that there is a reluctance of accountability and transparency in the Emfuleni local municipality due to the dealings of a conniving nature by both the politicians and the officials. It was further spelled out that some projects had been signed off without proper planning of implementation nor the following of correct procedures that promote good governance (Templehoff, *et al.*, 2021: 121).

On a bigger spectrum, a study by Dipholo (2014:43) indicated that since the 1980s, the public management has witnessed enormous changes focusing mainly on the governance brought by dishonesty in most independent countries in Africa which were colonized before. The results therefore brought public sector management reforms due to administrative disappointments as the leaders personalised administration and made it to be characterised by total exploitation, favoritism, rigid red tape, and inappropriate delegation of functions which resulted in autocratic rule compromising ethics of moral governance. This happened despite the World Bank's requirement for transparency of information that will strengthen policy debates that will lead to eradication of illicit activities.

The South African government has experienced intense criticism post–Mandela era for corruption that is experienced in all governmental spheres. This therefore led to South Africa’s corruption to be viewed and regarded as either official or general, as it was left unhindered and resulted in poor governance more especially in the local sphere of government which is placed nearer to the residents to improve on responding to the demands within a short space of time. Given the scourge of corruption which is witnessed and proofed by granting of government bids to the politically connected families of former emancipation factions who assert their authenticity from the emancipation struggle (Dipholo, 2014:46).

Furthermore, the study agrees with the respondents and the sentiments of former President Thabo Mbeki indicating that, good government policies aimed at public sector reform will not prosper if they do not possess effective implementation because of corruption which manifest itself by employing personnel which is not qualified (Dipholo, 2014:49). One of the factors that fuel illicit activities in government is lack of performance reward system for bureaucrats and politicians in the public sector for those who are ensuring improved performance in their divisions or departments or regulating expenses of departmental actions at all spheres of government especially after 1994. The consequence of this process is shameless financial wastage by politicians and connived bureaucrats under the presence and actual interference with the system for own benefits (Dipholo, 2014:46).

As it was indicated that if corruption is not attended it becomes a culture for the institution (Rabakula, 2014:87). Dipholo (2014:49) agreed with the sentiments when indicating, that well organised and continued dishonesty that is deep-rooted in government triumph over the intention of restructuring. The study further states that, the most partisan and influential people conspire in deceiving the administration and the common man and woman. Consequently, like most developing nations, South Africa is experiencing significant obstacles in the absence of excellent governance by people who constantly avoid observing the rule of law and good governance.

The study by Kroukamp (2011:32) in Maqoko and Asmah – Andoh (2019:83) indicated that the South African public Service has gained itself a reputation for inefficiency, corruption, and incompetence. Professionalising administration of local

government will show longevity in tackling the issues of corruption and incompetence.

In this study, corruption as spelled out by the respondents is observed from the following themes:

5.3.3 Skills

The respondents on this theme indicated that “if you appoint me as a manager without relevant qualifications such as Public Administration in the position of leadership or manager, I will never appoint somebody higher than me with qualifications because he will undermine me”. In essence there is inferiority complex for most managers in appointing skilled and educated people who might be seen as a threat when the contract expires after five years for the manager. “I will always appoint the weaker and that speaks for itself”.

Dipholo (2014:46) agreed with the sentiments by indicating that, majority of divisions or government departments the entire functioning layer is dominated by political corruption which runs it to minimal production because of skills deficit. According to Kings (2020), the local sphere of government is highly experiencing shortage of skills to date. In South Africa with 278 municipalities, the ones with engineer within the staff compliment is 76, espoused by the South African Institute for Civil Engineers.

Furthermore, the report’s findings revealed that under Mokonyane’s tenure at the Water and Sanitation Department, existed extraordinary charges of staff throughput and shocking quantity of positions and highest-level suspensions. these created an atmosphere wherein human resources were at risk to subjective conclusions or decisions taken by the higher echelons. These was witnessed by the 2015, the departmental domestic evaluation that took place to rationalise and justify the suspension of bureaucrats or officials with the intention of justifying suspensions to the parliamentary committee as consequence management.

Some respondents indicated that, ‘people are appointed not only on what they possess as skills and qualifications, but they are appointed on what will they do for the sitting leader’. A further indication was done when the respondents said they

were instructed to appoint staff which is not suitable to the institution but suitable to the politicians. This seem to be true according to Kings (2020) who indicated that, the disappointments in water delivery are motivated by unskilfulness in the department, as per the research published in the journal transformation, which began by indicating that: The South African state has transformed since 1994, but not in the way many people had hoped or expected (Kings, 2020).

In concurring with the sentiments, a finding was done by Maqoko and Asmah – Andoh (2019:70) that “Politicking and in appropriate interference in municipal administration has been the root cause of most municipalities’ failure to deliver public services”. The study further revealed that a good example of this practice is the Nelson Mandela Bay Municipality which has experienced the administrative instability, with an undesirable effect on governance and delivery of services because of avoiding skills but focusing on patronage in appointing officials. The study further argued that the attention on skills and competence will be unsuccessful unless the political-administrative line is refined to warrant a sharper distinction amongst the protagonists of the party-political principal and the administrative head.

Looking at Max Weber’s dichotomy of (1980) which argued that, to ensure an effective relationship between politicians and administrators, there should be clear terms for roles and responsibilities because bureaucrats (administrators) are supposed to be politically neutral, as their main role is to deliver technical, non-political advice to political representatives and execute decisions to the best professional standards in theory and in practice (Maqoko & Asmah – Andoh, 2019:70). In modern day local government running, this seems to be difficult because often, the bureaucrats or the officials in the local government are office-bearers in the political parties contesting for power mostly in their branches, regions, or province. Consequently, this situation brings forth biased results that conflict in the day-to-day execution of duties between administrative officials and councillors (Maqoko & Asmah – Andoh, 2019:70).

The Local Government: Municipal system Act, 3 of 2022, as assented by the President on the **17th of August 2022**, which is the amendment of Section 1 of Act 32 of 2000, as amended by Section 1 of Act 44 of 2003, Section 35 of Act 51 of 2002

and Section 1 of Act 7 of 2011 makes provision that prohibits the municipal managers and the managers who are directly accountable to municipal managers from holding political office in political parties. In the act, the political office is defined “in relation to a political party or structure meaning “(a) the position of chairperson, deputy chairperson, secretary, deputy secretary, treasurer or an elected or appointed decision-making position of a political party nationally or in any province, region or other area in which the party operates; or (b) any position in the party equivalent to a position referred to in paragraph (a), irrespective of the title designated to the position”.

A dissimilar view was raised by one respondent who indicated that people are appointed with the required qualifications and competency but are corrupted by the system. “The contractors are the main culprits here; they do not do their job accordingly and later bribe the officials who are supposed to do the inspections. A poor official who is broke at the time with no money for petrol end up succumbing to the illicit practice which has long negative consequences to our people”.

The supply of water and sanitation provision in the South African government and in the municipalities is run by some officials who are not capacitated to hold some positions. Some people in strategic positions lack competent skills in planning, budgeting and in the running of the WWTP (Hanyane & Nkgabe, 2012:730; Machaka & Leshiba, 2019). The WWTP receives a high volume of inflow and ultimately it has high effluent that impacts negatively on the environment which should provide clean water to the people (Masindi & Dunker, 2016:1; Du Preez, Toerien, Dama-Faki, 2013:23; Mitchell, de Wit, Blignaut, Crookes, 2014:3).

The clean water that must be provided to the people is negatively impacted by urbanisation growth or by rural-urban migration (Abrahams, 2017:9). Thus, as the population grows, the amount of water and sanitation requirements increases too. Municipalities such as Polokwane, which is in the Capricorn District are experiencing additional burden on the current drain systems structure which is presently one of the 85% run-down structures as presaged in the special edition of the South African Medical Journal from 2009 (Kings, 2015; Cosgrove & Loucks, 2015:4823).

5.3.4 Deployment

The respondents in different terms indicated that, if the department is led by a person who is fully influenced by *politicians, bosses, or bishops*, such a person will not advise them accordingly but will say what will be pleasing to them on their personal interest and that cannot be called professionalism. This then just shows that the person is not fully equipped to do the job as preference is not on the municipality's service delivery agenda but lining of pockets to all (***Ka mina ka wena***) team, ***loosely interpreted 'people must share in these illicit processes.***

According to Mafunisa (2001:327) in (Maqoko & Asmah – Andoh, 2019:83) a person must first master a body of knowledge (theory and practice) and acquire operational skills through specialised education and career experience before being called a professional. Furthermore, to professionalise the public service and curb the eroding political tendencies two pieces of legislation were enacted and implemented in local government namely the Municipal Systems Act 32 of 2000 and the Municipal Structures Act 117 of 1998. The main intention of these legislative pieces was to make local sphere of government to be professional by opposing the unwarranted influence of politicians over a municipality's managerial functions as well as to responding to political inclinations like placement of cadres as well as political infiltration onto administration.

A study by Engida et. Al. (2012) in (Rabakula (2014:90) contended that nations with extreme levels of fraud and patronage, if New Public Management restructurings are to be presented, consideration to be made is to check if such restructurings will run down the prevailing exploitation of resources or accelerate excessively than its current format. In the modern days it appears to be beneficial to be politically energetic as that is a better way for positioning one closer to the resources.

The author further, argues that the concept of party-political benefaction and partisanship among municipal administrators in strategy formulation and making of policies is unavoidable (Maqoko & Asmah – Andoh, 2019:70). These include no plans and strategies for staff retention; a deficiency of rare and technical skills; the unselective dismissal and deferment of officials, more particularly on the top echelons or senior level who seem not to agree with some political dealings; and

politically driven deals on administrative matters that affect the enforcement of disciplinary measures against officials who have transgressed (Maqoko & Asmah – Andoh, 2019:83).

The respondents further indicated that, the competency of those who are in offices to advise the politicians are sometimes questionable as they possess no such skills. A study by Dipholo (2014:46) agreed with the researcher's findings as it has stated that given the political history of South Africa the condition known as the liberation dynasty syndrome make provision that employment of senior staff at the level of Director-General, Deputy Director General and even at Chief Director is considered on political lines and not merit. Thus, in most government divisions the entire operative division is politically tainted in that way leading to low productivity due to shortage of skills. This political disorder / syndrome distresses procurement processes. A practical example is displayed by the police buildings story that led to the dismissal of the South African Police Commissioner and the former minister of public works.

In acknowledging the scourge of this problem ANC (2022:11) indicated that, State is at its weakest at the municipal level there is therefore a need to emphasise hiring of people who meet the required merits complemented by honesty testing for all people to the public sector as well as developing prospectus for growth and for continuing scholarship of officials in the public service.

5.3.5 Planning

The respondents indicated that the challenge with planning is resources, the district municipality has very good plans from the divisional heads. The other contributing factor is the political will to have long term plans implemented phase by phase given the limited resources. Some respondents in different wordings indicated that there is a need for visionary leadership who is not only willing to be seen opening big projects as a ceremonial figure but ensure that plans are developed and implemented phase by phase even beyond his/her term of office. The other respondent said, "there is poor planning due to financial resources". One respondent indicated that a new area in the Polokwane Municipal area has planned so bad that there is no sense in what is done.

The respondent further indicated that the area was illegally occupied as it used to be a farm before and the municipality decided to develop the area, surprisingly there is no water source, people depend on their boreholes, no reservoir but a sewage plant was installed with pipes. The respondents further said, the district municipality only plan on maintenance only when they want to do the job, there is no planning ahead. This is also the case with the WWTP in the district. That is the reason their performance is so bad. The others responded by saying there is a need for the municipalities to start prioritising what their co-functions are as water and sanitation is one of the chief deliverables which keep a nation healthy. Failure to get the priorities right means a new culture of destroying the ecosystem is groomed.

The respondents indicated that, water is a commodity that we wish to have in our yards. The problem of planning is not only in the municipalities, but it is also at National government 's controlling department of water and sanitation. Kings (2020) indicated that the Department of Water and Sanitation was criticised for not opening itself up for scrutiny by its parliamentary committee and continued its trend of submitting its quarterly report late. The committee's chairperson said the department presents "disastrous results" as if they are "normal" and it has no clear turnaround strategy.

Some of the respondents strongly indicated that planning is seriously lacking in the district supply more especially on the supply part, for instance, Lepelle Northern Water should stick to its 287 mega liters of supply as it cannot reach 200 mega liters. Recently, some of the reasons for the lack of planning are the loss of water due to theft, vandalism, illegal tapping of connections on the main pipe and of course organised corruption by the acting members on the organogram of the institution headed by the procurement processes with the board watching.

Planning seems to have been done in an opposite direction of service delivery in most parts of government. According to the research done by *The Mail & Guardian* on contemporary and previous personnel, findings were projected and sighted in detail from a division that focused on turnover at the cost of the department's motto: "Water is life". Hefty infrastructure developments which were capital intensive were a

focal point for self-enrichment as more money was embezzled and stolen. The employees said Zuma's pronouncement in the successive State of the Nation addresses that the big builds were the way to go and they came as a "gift" to those who sought to profit and favour their friends.

Employees who were seen to be obstacles to self-enrichment and trying to protect the state funds were suspended charged and dismissed or pushed out. The report includes an infamous example of the director general Pam Yako, who "made a notable attempt to combat corruption". This included "cancelling an IT contract to a large ANC donor". In response, "a network of corrupt officials, consultants and service providers orchestrated a deliberate process against her", which resulted in her suspension. The official reason given was her alleged involvement in a suspicious R300-million tender.

5.3.6 Theft

Theft is a planned activity / event according to the respondents, *'theft is rife because people see an opportunity to fill their stomach not looking at the long-term replication to the municipality'*. An example was presented by a respondent who outlined it as follows: *"If I get a job of installing cables or a transformer as a contractor and not get another job in a while, I organise the removal of the same transformer so that I be given another job, this time I will not have costs as the transformer will be available and I pocket more profit"*.

Furthermore, the other respondent who echoed almost the same words, further used a metaphor of vegetables, and said *'if cabbage is R10 at fruit and vegetable store why is it ten times more expensive when is bought by government. If that is not theft, then tell me what you call it'*. Now, when something is damaged in the municipality the hired officials cannot do anything except to report and involve the supply chain to get the problem fixed. Sometimes you find it's just a fuse which cost R 6.00 to buy. *'Imagine people having to take not less than three weeks without water for such a simple thing'*.

In further stressing the problems of crime, one respondent indicated *that, there are some transformers which Eskom is refusing to replace because even their insurance is refusing to pay them before security is in place as it has been replaced almost five*

times. The good thing on theft was since the discontinuation of generators, the motors are not stolen because the pump houses are thoroughly secured, and the new extensions moved towards the area where the boreholes are. One respondent said, the people realised in South Africa that there is a culture of self-enrichment, after the municipality installed meters in some areas around Polokwane, the people connected water in front so that the meter should not read, and they get water for free.

Some respondents further indicated that to prove that theft is organised, the water tankers make money. "I do not know where they close the tap or valve to stop providing water to us but open it to fill the same water in the trucks. They bring the same water that was supposed to be transported to us through the water pipes as a commodity with a driver using diesel". The other two respondents indicated that if the transformers are stolen outside the village for water supply why is the municipality not deploying warm bodies to secure the equipment or use new technological means to monitor the areas but insist on transporting the expensive commodity water.

The words as said earlier were witnessed by the researcher while attending a funeral in the village within Polokwane Municipality where the ward councillor did not show-up after being invited to give a speech. The representative of the traditional council said, *"we knew very well that the ward councillor will not come because he knows there is no water in the village, and he failed to get us permission to install a valve to control water from the reservoir so that even people at the high lying areas can have water. Instead of solving this problem 'water come transported' on a truck"*.

This makes the comment by one respondent who said *that "I suspect that equipment such as transformers is stolen by those who provide water through trucks. Either private trucks who sell water to the people or those who are milked by the municipal officials"*.

The other responded by saying that there is a need for the municipalities to start prioritising what their co-functions are as water and sanitation are the major deliverables which keep a nation healthy. Failure to get the priorities right means a new culture of destroying the ecosystem is groomed. Another respondent said, in the municipalities there is more white-collar crime than the actual crime. This is seen by the continuous schemes of digging and laying same pipes over and over, but no

water is provided, “if you don’t believe me lets go to Ga – Makgato (Blouberg municipality) and see how many schemes were appointed but no water”. Go to Dikgading and witness a project which has been there since 2016/7, it’s not yet complete reasons are not known. The same as Nyakelang with the 2017/8 project”.

In further stressing the problems of crime, one respondent indicated that there are some transformers which Eskom is refusing to replace because even their insurance is refusing to pay them before security is in place as it has been replaced almost five times.

Literature shows that, corruption in municipalities is overwhelming more especially, amongst the municipalities of Giyani in Limpopo and Standerton in Mpumalanga where financial resources and the budget to maintaining water treatment plants and pipeline infrastructure which ended up collapsing were embezzled. According to Kings (2020), these sentiments seem to be true because the department’s prosecution support, the Blue Scorpions’ human resources, was compacted to three dozen inspectors and ended with no persuasions for unlawful transgressions such as contaminating water or functioning with no water licence.

Further literature by Compton (2021) seems to agree fully with the sentiments that the blocking of water is theft by citing experiences in different parts of the continents:

The author cited that water is essential for anthropological existence, food production, community to survival and thrive for both human beings as well as plants, animals, and the ecosystems. The author indicated in agreement that the blockage of streams by farmers is creating havoc to the people because, the scarcity of water results with catastrophic situation. Loch (2020) in Compton (2021) acknowledged that water stealing is a universal problem that transpires once corporations and persons illicitly take water informally without permission in different ways such as captivating it from lagoons and other natural sources or thieving treated water without remunerative it and drawing water without following or breaching the environmental guidelines as said by Felbab-Brown (2017) in Compton (2021).

The author indicated that in most cases, agriculture adds to water theft as the agricultural practices are to blame for high utilization of water because, food production utilise almost seventy percent (70%) of the worldwide water utilisation. It is also the largest and the leading contaminator of water sources in lots of areas. The author further propagated that, the **administrations** are to intervene more especially on the strategy modifications that speak to problems on both the farm and the state on water related matters. Furthermore, for water stealing is a leading global matter because of is **uncertainty** displayed by climate instability, drastic change of the rainfall patterns and the harmful causes of human being to the natural environment.

The author further indicated that one of the reasons that might be contributing to water theft is the increasing town inhabitants thereby leading to intensified struggle to get water from the sources of supply for consumption and bathing. Furthermore, the electricity supply sector and companies require more water to increase their production and keep pace with the growing and increased population growth. One of the further contributing factors is the **lack of policing and effective monitoring that makes it easy to steal** water without robust consequences for thefts. Compton (2021) further recommended that, regulating water requires to be a compulsory requirement for populations and policymakers should ensure an acceptable, reasonable, and ecological usage of water for people, food production, businesses, and environmental environments.

The study further indicated that a study by Nature Sustainability (2021), ascribed theft of water to unreliable resources and increasing requirement. It established that persons and corporations are the main proponents to point a figure at because they contribute to the methodical failure of governmental, lawful, and instructional pursuits. Researchers uncovered that in America cannabis farmers were found illicitly pilfering water to their farms from the ignition water faucet with no acceptable authorisations. In Spain, the study uncovered that the regulators who tried to stop agricultural users from stealing water were often attacked. Moreover, the Spanish Ministry for the Environment estimates that there are 510, 000 illegal wells in Spain.

Loch (2020) further indicated that in 2020, many farmers were arrested in India because they created illegal farrows and canals which was diverting stolen water to their individual areas. Numerous illicit water pumps used to obtain water with no approval was found in Nathsagar. In the new South Wales, Australia the Murray-Darling River was widely discussed in relation to the extensive theft of water which made the public aware of the sinister activities and exposing water (mis)management to the public.

At that basin, 'rascal irrigators' appropriated water resulting to billions of liters using very strong Prohibited extractors and pumps that created the stream flow upstream. In the vicinity it was discovered that there were Immense concealed reservoirs and dams. Given the level of corruption senior management administration executives blocked and made it impossible for the investigators to execute their job, those officials leaked private records providing confidential information that helped the illicit irrigators to obtain ambiguities on the government system and manipulation the rules (Loch, 2020).

Compton (2021) further indicated that, stealing of water is definitely a **universal difficulty** which requires that people and businesses need to join hands in fighting this upcoming scourge as it will drive the production high if not quarantined. The unfortunate reality is the final verdict lies with authorities. The important thing is to ensure that every stakeholder understand and acknowledge the genuine importance of water, once that is done satisfactory approaches will be able to follow. The approaches will amongst others incorporate suitable consequences for water stealing, improve investigation into water allocation, and the advancement of useful monitoring methods.

These sentiments of government having a last say with role-players having to contribute to water security clearly shows that the **comprehensive social compact philosophy** is the key factor to most South African problems. In a way this might help in alleviating white-collar crime which is mostly carried out by people who are supposed to protect the system from abuse.

5.1.1.10 *White collar crime*

The respondent indicated that “it pains me to know that millions of rands were spent on no water projects” another respondent said, reticulation was erected around 2008/9 even today there is no water. There were ineffective boreholes drilled to mostly extort money from the struggling municipalities. Worst of all, the illegal catchment as well as illegal dams are left untouched by our politicians who connive with the farmers as most of the leaders are negotiating to buy those farms as most of them are old and leaving the farming business and the country.

According to Mathenge (2014) as cited in Rabakula (2014:90), the veracity in nearly all African nations bribe or “*rent seeking*” is becoming an order of the day and that creates an actual enormous challenge because favoritism and all sorts of exploitation frequently ruin the procurement or bidding process due to lack of what Methenge (2014) regards as lack of civic honor or public integrity.

The respondents further indicated that in the Capricorn District Municipality and in South Africa, the fact that water is regarded as a scarce resource made it to be a ‘*jewel*’ and an expensive commodity, consequently everything associated to its provision was made expensive. The officials took advantage of this loophole and ballooned the prices, connived with service providers or contractors to charge exorbitant amounts so that they get kickbacks. The respondent further said, “we live with this people every day, you cannot match their lifestyles. Now that investigations are rife in the government institutions and municipalities, they have reduced but not stopped. Let me give you a typical example, it causes on average R 60, 000.00 to drill a borehole of 100m, equip it with solar water pump, pressure pump and a jojo tank. But if you check the drilling price for the municipality is almost 200k just for drilling only”.

The respondents further indicated that to prove that theft is organised, the water tankers make money. “I do not know where they close the tap or valve to stop providing water to us but open it to fill the same water in the trucks. They bring the same water that was supposed to be transported to us through the water pipes as a commodity with a driver using diesel”.

The respondents further indicated that, “there is a **cartel** on water within the municipalities”. In summary, the respondent said there is high level of lawlessness in the water sectors. The officials have ballooned the prices so that their spaza shops within the departments can be profitable and that does not include their principals known as politicians ‘*whom we elected to make us suffer peacefully in the name of our comrade*’.

The response is supported by the findings which are from the Department of Water and Sanitation around 2015 where the department’s enforcement arm, the Blue Scorpions, was rendered dysfunctional and made not to prosecute anyone for water pollution related crimes nor functioning with no water authorisation and licence. To make matters worse and ensure that the cartel as spelled out by the respondent is operational “a supplementary wearing down of supervision on the country ‘s state of wastewater treatment plants effluent monitor the Blue and Green Drop reports were not released in 2014. Mail & Guardian reported that the 2014 barred report was going to expose that that municipalities treating water to safe, drinking quality were reduced to 44 compared to the preceding two years. In 2020 there was no information available on the condition of rivers running water and water consumed because of the amount at which sewage is being discharged into rivers and other water sources (Kings, 2020).

These sentiments are supported by the findings as spelled out by Kings (2020), from the Auditor general’s report in the Mail & Guardian where in the early 2000s, the then water minister Buyelwa Sonjica started to reshuffle the department “to achieve rapid transformation”. Because the process was mismanaged, this “resulted in the loss of critical skills” and “the weakening of institutional controls to counter corruption”. Furthermore, the greatest corruption, according to the auditor general reports, seemed to be in large infrastructure projects where permanent employees said they would be subcontracted to work at the department, with the person who employed them who is also a department employee charging the ministry for the “subcontractors” and then pocketing the difference.

The respondents further indicated that organised crime is seen by the continuous schemes of digging and laying same pipes over and over, but no water is provided,

“if you don’t believe me lets go to Ga – Makgato (Blouberg Municipality) and see how many schemes were appointed but no water”.

The respondents further re-iterated that they will never pay for water which does not meet the basic needs, the only payment they can do is to private water supply by people with bakkies and donkey chards not the non-servicing government which looks at its own leaders not the masses. concern was raised that areas such as Polokwane need to supply its own water and not depend on Lepelle Northern Water as they proved not to have capacity with huge budgets given annually. ‘Infrastructure needs to be taken away from Lepelle Northern water and the municipality maintain it themselves’. The responded further said, “*now Lepelle Northern Water has acquired a loan of almost 4.5 billion rands for infrastructure, the expectation is to have the money wasted and disappear ultimately*”.

In their own words the respondents indicated that white collar crime is a way of life in the municipality, and they further indicated that there is a need to:

- “Monitor and do lifestyle audit for municipal staff members more especially those in supply chain and all those involved in the project including ward committees.
- Cancel all trucks providing water and turn that water into pipes or put-up temporary tanks that will be filled instead of running in the townships and villages for accumulating more kilometers while people are at work and no water is given to the majority”.

The respondents further, raised an alarming fact that in South Africa people work for their own benefit not the country. For instance, most of the cable theft and transformers experienced is “*not only due to foreigners because those cables are taken to the scrapyards that are known. This shows that the ‘project’ is just a smoke screen of cartels*”. The respondents further indicated that organised crime is ignored from the catchment management agencies through bottled water supplied, “*why don’t they turn that into a pipeline because the money spent on those illicit procurement benefitting friends can in five years be an appropriate pipeline that can provide sustainable clean water to a villages or villages*”.

The sentiments as raised seem to concur with what Mills (2012:1) indicated by stating that, the Africans are poor because the leaders have made that choice. Jayte (2017) supported the sentiments by quoting Prof. Lumumba when indicating that, Africa is poor, and corruption thrives because *“Africa is in the business of canonizing thieves and sanctifying and celebrating the wrong people while it vilifies our good men and women”*. He further said that Africa is in the business of punishing small thieves and electing the big ones into public office. Despite the forest of legislation Africa possesses they are mainly honored in breach. As summarized by Jayte (2017), it is said that Somalia is poor because it is badly governed.

Africa has succeeded in creating an environment which allows thieves to thrive because studies on corruption are hard to achieve empirical data and researchers depend mainly on public offices with the reported acts of corrupt activities, estimates from the experts and public perception (United Nations, 2020:93).

Furthermore, the environment is made ripe that the people who engage in illicit activities occupy positions of power and influence either by deployment or by being voted for and this ultimately undermines the ability of the government or the administration to enact and implement policies in situations and areas in which government intervention is required. Such leaders fear to lose power and engage in self-serving behaviour of prioritising their self-interest at the expense of the masses (Wisse, Rus, Keller & Sleetbos, 2019:742).

There is an evolving culture which took many years in celebrating ill-gotten wealth from those in power and control over others and their institutions (Wisse, Rus, Keller & Sleetbos, 2019:743). The elected will promise to fight theft which in fact they appear to be fighting but are perpetuating it in practice. Emerson (1962) in Wisse, Rus, Keller and Sleetbos (2019:743) states that those that are in positions of power can act independently and do not have to rely on others to obtain rewards or avoid punishments. Looking at theft from the municipal service delivery point of view, it is pervasive and pernicious to the detriment of sustainable water and sanitation. Furthermore, it hinders economic and political growth at the local level.

Based on the *infra* sentiments and the respondents of the research questions, there is a need in the municipalities to create an environment and culture which is hostile for people to participate in theft and corruption. Thus, if you reap what you have not sown there should be dire consequences. The culture of privatising public wealth that is meant for the development of the people needs to be frowned upon followed by the lifestyle audits of those responsible for the procurement and for the leaders in the municipalities. This act of corruption is seriously undermining democracy which people thought is a vehicle for bettering their livelihood.

Looking at the respondent who said that there is a need to cut the budget for operations in the catchment management agency, there is dire need to create public awareness and ensure behavioral change of those who are the custodians and executors of graft in depriving people better living conditions through legislatively decorated theft done within the arm bit of procurement procedures and processes. The awareness should be accompanied by the pain of deprivation such as imprisonment. Those who engage in graft within the municipal structures should not be accommodated when seeking refuge in their ethnic groups nor be protected from punishment by their fellow comrades, tribe's man / woman.

Looking at the respondent who said if the pipes or the water pump is stolen, we know who the thieves are in our community. Before the community calls the police, they must approach the suspects and come up with the truth because they know the consequences if the people can take the law in their own hands. *"In African tribes a thief is protected because, 'we know the thief' but it is our thief"*. Mostly is a person who comes from our social groping's and religious circle. Given the scourge of illicit activities in our institutions of governance there is a need to 'avoid thieves oxygen to breathe so that they suffocate in their own deeds and avoid rationalising corruption in our governance structures.

5.4 Overview of research findings

The research findings as based on age, gender, marital status, and work categories indicated that the people who can afford seem not to have a problem of paying for water and sanitation services if they are provided on a consistent supply. The problem is to pay for something which one cannot get. The study unearthed that the

people get discouraged and feel abused by the level of corruption which is taking place within the municipalities with no consequences.

In providing an example, the respondents indicated that the supply of water by trucks is a clear indication that abuse is institutional as the trucks come when people are at work and there is no one to collect water. On the other hand, the project of truck water supply is just a self-enrichment scheme which is well organised from the politicians and officials and any attempt to dismantle it will receive the greatest political – administrative resistance as it emanates from making water a commodity which was termed a 'jewel' transported on trucks and removed from the pipe. This becomes a hindrance of service provision on its own because less people get portable water for their households.

The responses pointed out that the amount paid to water trucks can in five years be converted to a pipeline that will service a village or some villages. The fact that it was raised by the respondents that there are some cartels within the municipalities and water management agencies makes it difficult to have the problem easily resolved because the beneficiaries of the illicit system will not make it easy to not benefit from their actions.

Looking at the theory of rising expectations and the above sentiments more needs to be done to improve the living conditions of the people. In most instances and in the municipalities within the Capricorn District, there seems to be attempts to provide water, but the jewel does not easily reach the people as the project is done without first identifying the water source.

The other fact that needs to be attended to as a matter of urgency is the illegal water catchments which make most of the rivers dry. The water license holders need to be audited to ensure that they use water as per the limits and allow water to flow so that people within the district can have proper water sources. If this can be done more people will have hope and trust that their living conditions will improve to the better as that will allow them to use the French toilets easily even in the rural areas through properly lined septic tanks that are emptied by the municipality.

The fact that some respondents indicated that Lepelle Northern water which is supplying Capricorn District Municipality with water as the management catchment agency is providing good water for human consumption is a good indication that if all the efforts and resources are pulled together for bettering the people's life's in improving service provision and focus less on resource embezzlement people will get better services and the socio – economic conditions will improve.

Sufficient water will mean properly running sanitation. The challenging factor with proper services provision is the questionable skills of the people that are employed in the municipalities where the engineers are always consultants. Most of the qualified staff seems to be ridden off when refusing to take unlawful instructions which are mostly not beneficial to the institution but to the individual 's pockets.

Looking and analysing the public choice theory skills required by most leaders in municipalities is not for improving services as a primary requirement, but it is the skill that might be seen like providing services to the people while in essence is for syphoning resources for self-enrichment. This is seen by the way cadre deployment is exercised and executed.

Some respondents made it clear that planning is not done to benefit the municipality at large but mainly to ensure self-enrichment. Lately, it is said that there is an attempt to get people who will ensure that books acquire clean audit with less service delivery on the ground. This is seen with the responses given on the delivery of Lepelle Northern water where the ground delivery indicated that less money is spent on the project, but more money was paid out of the institutional coffers.

5.4.1 Fulfilment of the research objectives

This section of the chapter explains how the objectives have been met or have not been met as outlined in Chapter 1.

5.1.1.11 Investigate the causes of poor delivery of clean water and proper sanitation facilities to the citizens of the Capricorn District Municipality

The research has discovered that there are various elements that contribute to the provision and delivery of clean water as well as to sustainable sanitation to the citizens of the Capricorn District Municipality. The respondents coupled with literature indicated that consultation is in some cases done for cosmetic or compliance purposes more especially when there are projects to be implemented that require people to be hired within the jurisdictional area where the project must be implemented. It was also discovered that consultation is mostly done for IDP purposes and when new challenges are experienced people are not consulted and be informed about the challenges being experienced.

The other discovery is corruption which is seen to be manifesting in different formats ranging from employing people with lack of skills, position cadres in positions of power so that resources can be channeled to where the bosses need them to go. Planning is done to syphon resources to benefit individuals, and there are projects that do not yield water when completed and they must be redone.

In most areas, the pipes which are laid, and the taps provided do not yield water because the planning did not identify the source at the beginning of the project. In some areas the pump operators are a contributing factor because they are not fully committed to their work. In some areas they are supposed to close valves to supply different parts of the community, but they sometimes ignore that and pump for the sake of pumping and those in the high areas do not get water.

The theft of transformers that power the water pumps in the rural areas and turn provision of water through trucks as a temporary solution not a permanent way. The problem with sanitation is due to the ablution facilities which are not lined ending up contaminating the underground water. In the urban areas, the wastewater treatment plants are overwhelmed and receive more waste than they are planned for.

5.1.1.12 Examine the role of the CMA in the provision of clean municipal water

It was found that there are illegal catchments that were made by commercial farmers and the catchments which provide water to Capricorn District Municipality are not coping because they do not provide enough water that is required to supply all the residents with sufficient water.

The other discovery was that the institution is composed of acting management structure that makes it not fully accountable. The budget provided is not doing what it is supposed to do as more money is spent on smaller projects. Maintenance is not done properly on the ageing infrastructure. Instead, the institution depends on repairs when there is a breakdown and that impacts negatively on the constant supply of water to the civilians.

5.1.1.13 Evaluate the effectiveness of the cost management systems of water conservation and sanitation management

The research found out that there is a dominating culture of nonpayment in the municipalities, the people do not understand the rationale behind paying for the services they get. In some areas the people by-passed the water meters so that they get water for free. In the rural areas the people do not pay because there is no consistent supply. Those who pay will be donating to a communal borehole to pay for the pump operator.

A study by Lockwood and Smitts (2011:63) indicated that the failure to collect tariffs adequately will lead to the deterioration of basic maintenance function due to lack of finances.

5.1.1.14 Probe how water and sanitation can be improved and supplied effectively and efficiently to the citizens of the Capricorn District Municipality

The probe discovered that more resources were spent and are still being spent on projects that do not provide people with reliable water which they can get for the whole week without interruption. To solve the problem, a framework has been developed to address this problem. The framework might be applied in both the rural and urban areas if the problem persists.

5.5 Conclusion

The empirical data presented in this chapter gives a response on the phenomena. Data was presented and analysed in accordance with the responses aligned to the research questions as per the research instruments. The analysis of the responses considered the presentation of data from the literature review in Chapter 2, and from the concepts derived from the themes that developed the research's conceptual framework. The preceding chapter will present a summary of the patient issues that respond to the research objectives and the investigative sub-questions. The recommendations drawn from the conclusions made were developed in accordance with the sectors relevant to the objective of the research.

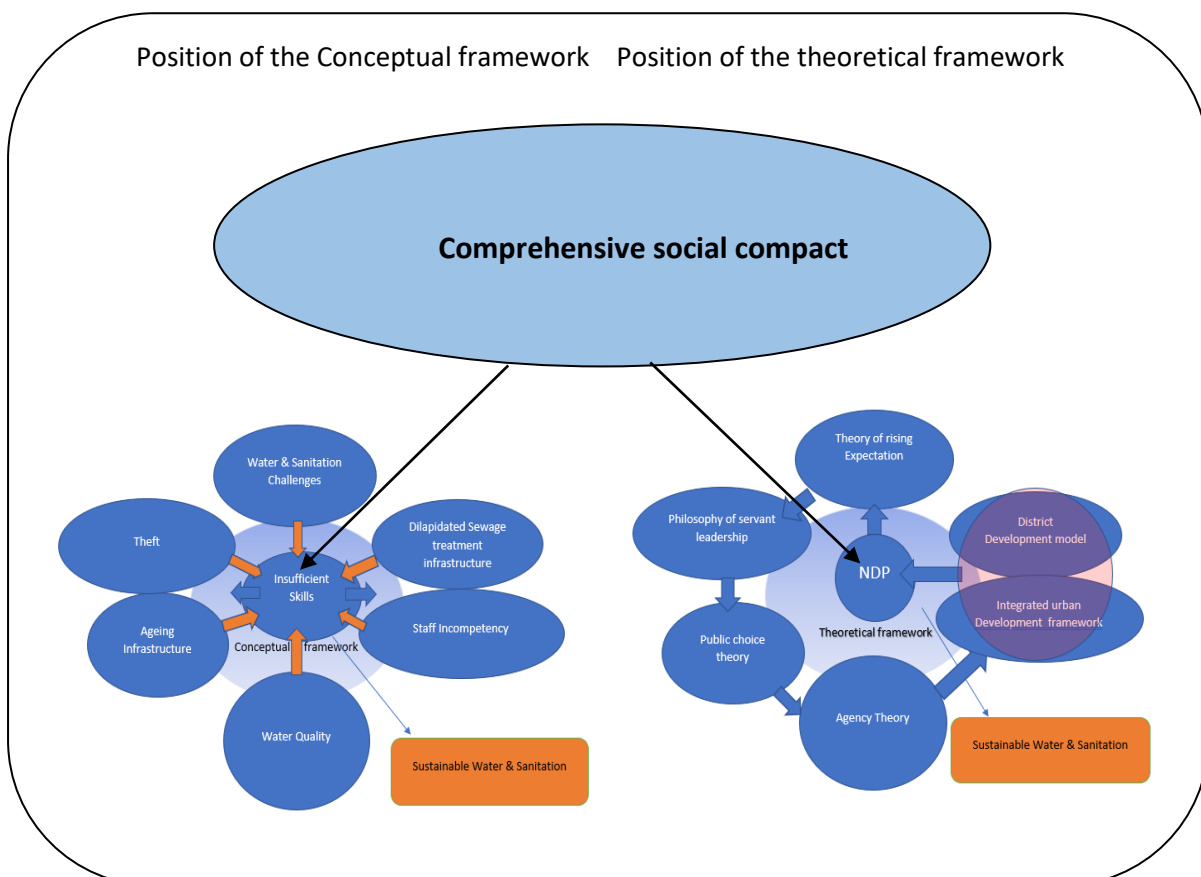
CHAPTER 6: RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

The study had Chapter 5 presenting the outcomes of the empirical study and it pointed out the variances, correlations, and expectations between the units of analysis. This chapter discusses a summary of the findings from the empirical study and literature. Furthermore, a general conclusion of the study as well as the achievement of the research objectives is also discussed. The chapter also presents the contributions to knowledge generation and makes recommendations to the *locus* and *focus* of public administration.

6.2 Interpretation of the research findings

6.2.1 Develop a program management framework



Source: Author 's own work

Figure 6.1: Proposed framework to solve the municipal problems

Looking at the position of the conceptual framework and the position of the theoretical framework, rescuing the failure of local government through the **district model** which cannot flourish under corruption a new approach known as '**comprehensive social compact**' has been introduced. This approach requires that the social partners need to engage one another and solve the triple challenges and develop common objective of eradicating poverty, unemployment experienced by the municipalities at large and 'government in particular'. The challenge will be the composition of those partners because if they are not eager to improve the service delivery problems of water and sanitation the effort will be fruitless. In the municipal set-up, the partners are mainly found in the local labor forum where the organised labor is represented by the union and management. The missing element in this regard is the business and tertiary institutions which are mainly consulted during the integrated development forums meetings.

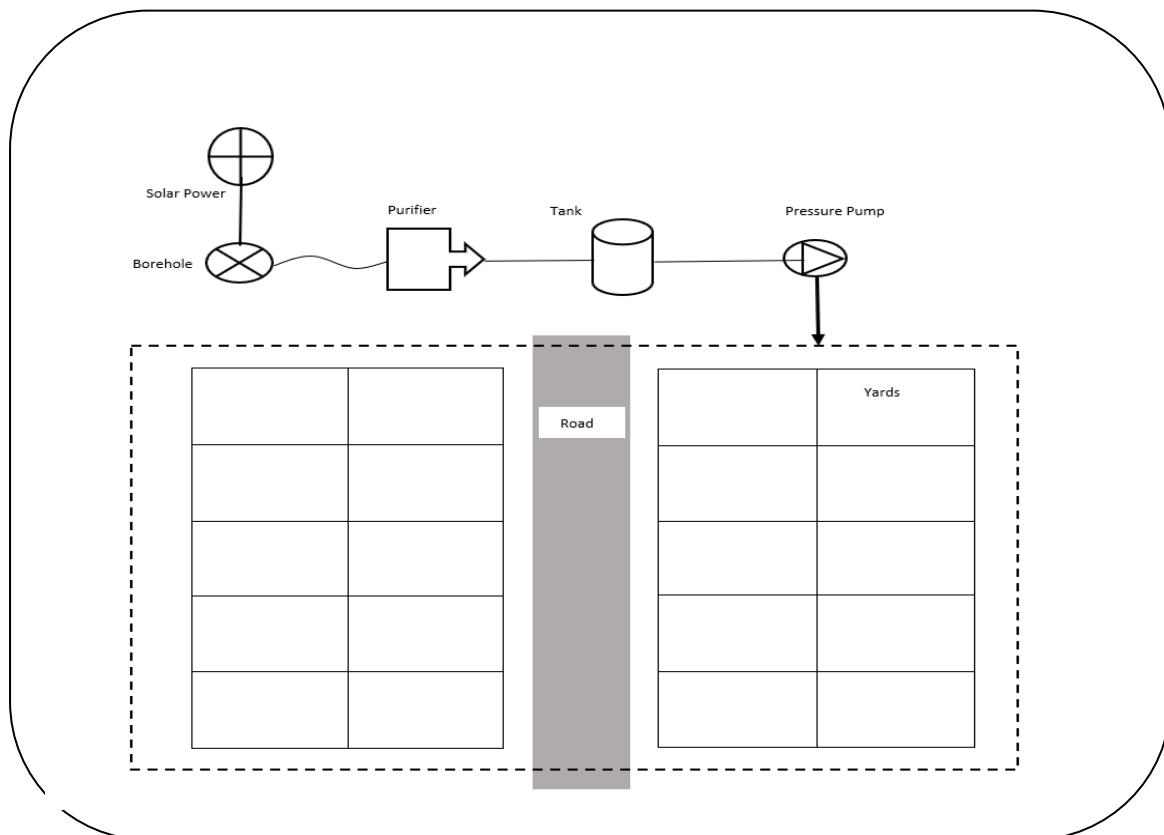
When solving these problems, the common objective should be to have the municipality as a winner 'not individual social partners' like what mostly happens at the local labor forum where the union seeks to demonstrate that it has power, and the management also shows that it has more power and can take decisions as it pleases them.

Literature by Bovaird and Loeffler (2009:398) in Maqoko and Asmah – Andoh (2019:70) indicated that the policymaking by politicians and appointed officials, should exercise authority along with other actors, including the private sector and citizens in taking decisions that will improve the socio – political conditions. In ensuring the comprehensive social compact as stated earlier, a study by Pretorius (2017:212) emphasised that the public servants, as well as the municipal administrative officials, must be impartial in implementing government policies, programmes, and projects (Pretorius 2017:212).

6.2.2 Proposed framework to solve water and sanitation in the district municipality.

From the respondents and from the data that was collected, it is clear that most of the time service delivery is hampered by the lack of skills, corruption, poor planning, white collar crime, theft, and inappropriate consultation. To alleviate all these it is imperative that in areas with no waste water infrastructure and water pipes as well as in areas with boreholes which are not providing people with water at all times, an analysis needs to be made of the area to put up tanks in the yard for two streets, to equip the borehole with a solar electrified pump, a pressure pump and install auto meters in the tank so that when water reaches a certain level in the tanks it automatically starts to pump.

Given the responses by the sampled population, it became clear that a lot of money is spent on infrastructure which ends up being stolen or on water projects which do not yield water on the taps when completed while more resources were spent and did not benefit the people. Therefore, this framework is proposed (Figure 18):



Source: Author 's own work

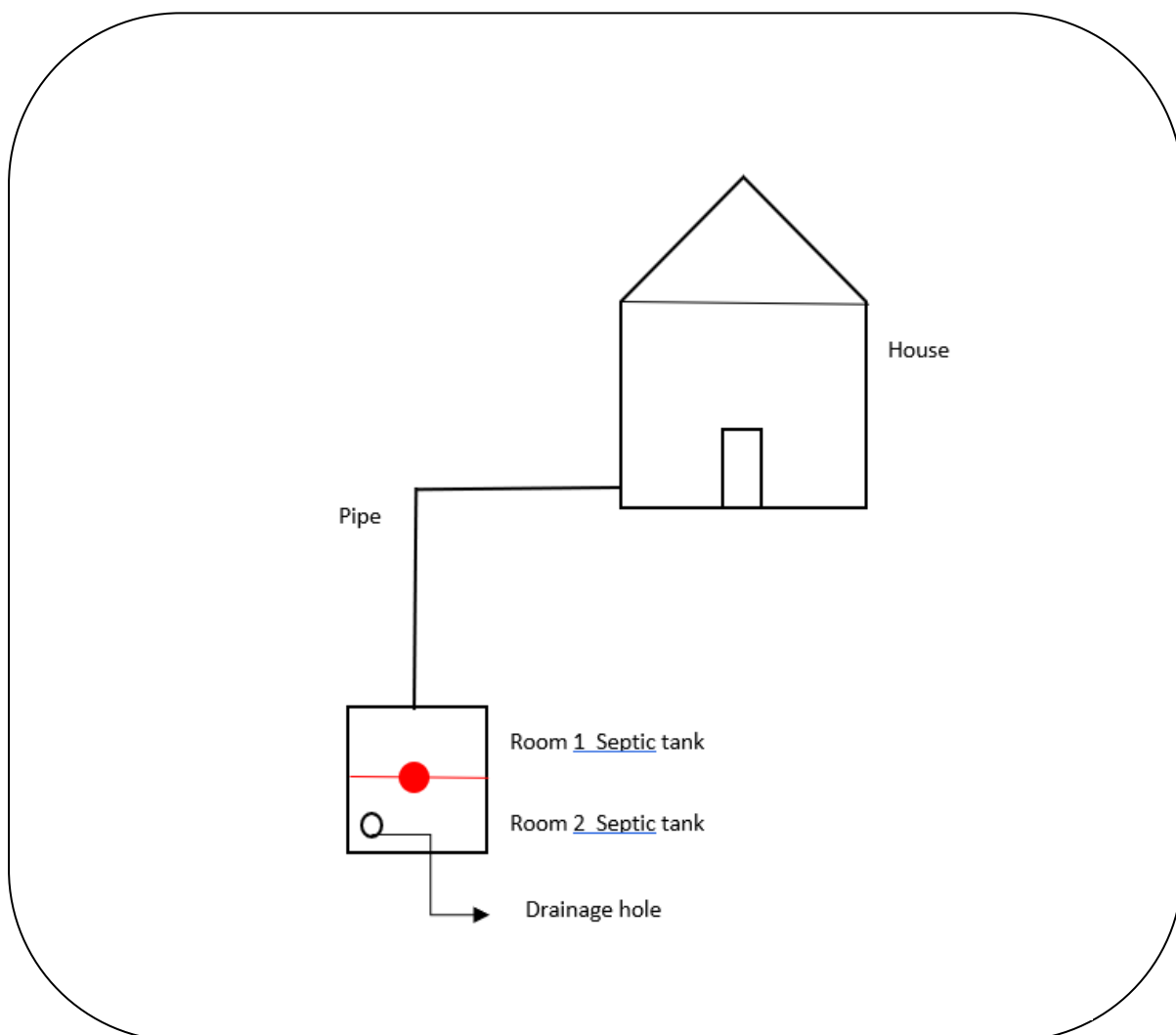
Figure 6.2: Proposed framework for sustainable water supply

The researcher after considering the literature from the study such as the one conducted by Lockwood and Smitts (2011:37) indicated that in most rural areas the community management framework did not effectively work because the project is funded, constructed and handed over to the community mostly by donors or Non-Governmental organisations with no appropriate training to the people who received the project and due to no additional funding the project ends up collapsing as there shall be no proper maintenance of the infrastructure.

The framework is further suggested based on the experience where most infrastructural provision of water was based on new infrastructure projects. The system requires that the traditional voluntary based approaches need to be improved and be replaced by professionals. In some countries, the community-based organisations who are running water related provisions became formally recognised in policies and legal frameworks. Thus, the community-based organisations were made more viable, and moved from voluntary to technically more competent ways of working (Lockwood & Smitts, 2011:143).

Sanitation seems to be a major problem in the rural areas and plots within the district. The same applies to the network infrastructure whose sewage systems are not keeping pace with the growing population. It is, therefore, imperative that a new model be adopted and consulted to have the people's buy in before being implemented.

When collecting data, the respondents who suggested an improved system are those in the rural areas, plots, and farms. Once a sustainable water supply is achieved, it is suggested that the toilets that are erected need to be lined and sponsored for by the municipality or they must have septic tanks that will be drained regularly by the municipal trucks. To achieve this, the skilled people who are properly trained in water and sanitation need to be employed to service the installed infrastructure. The respondents further indicated that there needs to be a proper indigent register by the properly elected ward committees to the municipality so that those who can afford should pay for the services they receive as that will make them sustainable.



Source: Author 's own work

Figure 6.3: Proposed framework for sanitation

It is generally known that there is a culture of non – payment in south Africa but the respondents indicated that it is fueled by the level of corruption experienced and if that can be extinguished, the people will be willing to have a good life and most know that it is not free, so those who can afford will pay for the services. Some community-based organisations leaders also indicated that it is difficult for them to tell people to pay for the services under the current situations as that will mean finance corruption.

The framework for sanitation is a model that needs to be officiated and legislated in the municipality if it is adopted because as a model it has proved to be functional with three roomed septic tanks where the last room is filled with stones and the

effluent gets into the stones and finds its way back to the underground water. Using the suggested framework implies that there will be no effluent sipping into the ground to contaminate the ground water because the effluent from the first room will flow to the second room and the municipality will suck it from there. The two-room process helps to avoid the septic tank being full and unable to take in more waste from the house and ultimately blocking the pipes and result in unhealthy environment.

The suggested framework requires that the drainage hole must be easily accessible by the municipality when coming to drain the septic tank. Most preferably all the holes must be adjacent to the fence or outside the fence for easy emptying even if there is no one in the yard.

6.3 Recommendations

The recommendations of the study are derived from the research objectives, and the research questions as outlined in Chapter 1 They are also adopted from the theories as presented in Chapter 2, and from the literature review as presented in Chapter 3. They also come from the responses from the sampled population as presented in Chapter 5.

6.3.1 *Recommendations to the municipal administrators*

- When appointing staff in the water and sanitation sectors, care needs to be given to those who are skilled to do the job because this is an essential service which has a possibility of creating diseases and this may impact the environment negatively.
- The municipality should ensure that the water and sanitation division is led by an engineer who understands the water reticulation fully and they must be registered with the Engineering Council of South Africa (ECSA) so that if they are found to be practicing illicit activities, the certificates of the practice can be stripped off.
- The appointment of service providers that own trucks to provide water should be a temporary mechanism not a permanent solution as that has turned water into a 'jewel' transported on the road to the people while it is a basic need.
- The public administration dichotomy needs to be exercised and officials should know their limits as advising politicians on policy related matters and

not using that opportunity to misinform them and take decisions which will favor them and their business friends on water and sanitation related issues.

- The pump operators should have technical skills and they must be able to maintain minor leakages as well as minor breakdowns and need to report to the district municipality as the custodian of water provision. Disciplinary processes must be taken if people stay without water for no valid technical reasons.
- Budgeting should include operations and maintenance at a minimum of at least 8% or above of the total asset value of the water and sanitation infrastructure, compared to the 1% which is currently allocated.
- The existing infrastructure which is not taken care of needs to be incorporated into the municipal asset register such as the idling boreholes.

6.2.1.1 *Recommendations to politicians*

- The politicians should ensure that the information gathered at the municipality is disseminated to the people. It is their responsibility to speak to the people as espoused by the servant leadership theory.
- The politicians should not take budget related information of projects and give it to their friends so that they get an upper hand when bidding for projects for delivering water and sanitation services.
- They should ensure that consultative meetings are well attended when reporting about the upcoming water or sanitation projects in the areas they are appointed because that will help to legitimise and reduce conflicts when water and sanitation projects are to be implemented in their areas more especially on the 30% local procurement and staff appointment.
- Politicians should desist from doing business on water and sanitation in the municipalities which they govern as that is gross corruption. When the taps do not have water, they are able to defend the non-service delivery in council meetings because according to the PFMA, the politicians are the accounting authority, they do not have the managerial or technical authority to the municipality.

- The politicians should not give officials, nor connive with officials to execute illicit transactions that will cost taxpayer 's money and not provide services as required.
- The policies must be amended to ensure that the employed staff should have technical skills related to water and sanitation so that they can be able to provide basic services to the equipment not only switch on and off and if the equipment does not work recommendation is given to supply chain for quotations.

6.2.1.2 *Recommendations to the technical practitioners*

- The appointed consultants should ensure that when the project of water and sanitation is given, the people should receive sustainable water.
- All the drawn plans should start with the source and not just assume that water will be taped from another supply as the villages and towns are vast.

6.3.2 ***Recommendations to the Catchment Management Agencies (CMA)***

- They must re-engineer the institution so that it appoints staff that will plan, budget, and provide services to the people without political interference on a permanent basis and avoid acting positions for a longer period.
- The CMA must improve the water reticulation by improving the liters they produce daily as they do not supply enough as contracted by the municipalities.
- The agencies must ensure that the budget is used efficiently and effectively in providing water and services.
- Strictly monitor the outputs on the ground compared to the money that is spent.

6.3.3 ***Recommendations to the study 'locus***

- The study discovered that there is political interference by those with political responsibility. That negatively affects the smooth running of the municipality regarding the six generic functions (policy making, planning, staffing, budgeting, organizing and control). It is, therefore, necessary to develop a curriculum which will address these issues effectively as Woodrow Wilson 's dichotomy left a grey area on the role of officials playing part in the policy

making processes while at the same time they hold political offices in their own rights.

- The political interference has weakened the municipal administration because the skilled people in water and sanitation are being pushed out and replaced by people with no appropriate skills. There is a need to develop training materials that will be legislated to be taught at all the training sessions for councilors and officials' inductions.

6.4 Contributions of the study

This study will have benefits for a variety of stakeholders both in practice and in academia, because it will influence the government policies discussions and legislation on poverty and poverty alleviation. The lessons drawn from this study will contribute to formulating strategies in dealing with the challenges on the supply of clean water and sanitation as poverty is triggered by these challenges. The study also seeks to contribute to the body of knowledge in the discipline of public administration and develop a framework guideline for the supply of clean water and sustainable sanitation. The final document on this study will be availed to the university library and any interested parties will be able to access it, and open further opportunities for conducting research out of findings of this study.

The study will be useful in its contribution to the practitioners of public administration and those who study public administration as a subject (*locus and focus*). The knowledge gathered from the literature and the findings will change the mindset of all the practitioners such as the planners, the engineers, the policymakers and the environmentalists. In some instances, the study will encourage intergovernmental planning as it cuts across the various disciplines in practical terms and municipal service delivery implementation in general.

6.5 Limitations of the study

The study was limited to gathering data from the sampled population and it was not investigative in nature. Some respondents recommended that the study should make some further investigations such as finding out when is the court case sitting for illegal catchment of water made by commercial farmers around the Capricorn District

Municipality. This matter needs a future study to investigate and ensure that the findings are made available as that might help to resuscitate the dead rivers down streams as they are blocked from the source (mountains).

In some circumstances, the study found it difficult to access some politicians and officials who were purposefully selected or recommended by the municipality as the relevant people to provide information in line with the scientific study undertaken.

6.6 Conclusion

The researched focused on the factors that inhibit sustainable water and sanitation in the Capricorn District Municipality. The recommendations pointed out that there is a need to improve the skills that were acquired in the municipality to deliver services, improve consultation with the constituencies, reduce corruption which is causing service delivery delays as more resources are illicitly utilized at the expense of the people who do not receive their services as promised by the sitting political party during the election manifestos. Caution should be applied in the adoption of the recommendations made in this research as the research findings are based on a small sample and should not be blindly generalised in all the municipalities with similar problems as the problems might not be homogenous.

CHAPTER 7: SUMMARY AND CONCLUSION

7.1 Research Overview

The research was necessitated by the **SERVICE DELIVERY CHALLENGES IN THE PROVISION OF SUSTAINABLE SANITATION AND CLEAN WATER** within the Capricorn District Municipality. Where the largest part of the municipality is dominated by the lack of consistent water supply and adequate sanitation which is a dignified way of people's being. The study investigated the factors that affect the smooth and consistent provision of water through the literature review which was the secondary data and through interviews which were the primary data.

A thematic content analysis was adopted in analysing the obtained qualitative data. Amongst the themes which were developed in analysing the data was **consultation** which the respondents indicated that it should not only be done during the integrated development meetings only, but it should also be done if there is a project that the municipality needs to implement in the jurisdictional area. The second theme that was identified was **corruption** which has turned into being a culture in most institutions in South Africa. The community leaders indicated that it is difficult to encourage people to pay for the services they receive as some of the local municipalities depend only on national grants for their service provision. The lack of revenue for such institutions implies the lack of resources to improve the quality of water and sanitation services.

Literature as indicated by Mathiba (2020:643) stated that in South Africa, one of the enemies of developmental infrastructure is corruption which is now a scourge that manifests itself in a regressive mood to those who are for a fair, transparent, equitable and accountable system of governance. The literature further states that, corruption snatches bread from the poor and it is an infrastructural crime putting the economic and social fabric of the country at risk.

The resources are further impacted and suppressed by the third theme which is identified as being the **skills**. The shortage of the skills impacts negatively on the institutional output because the people who are employed by the municipality are mostly hired to push the mandate of the sitting seniors. When small items break

down, they wait for procurement to advertise or call for quotations which comes with high prices for something that could have been solved internally.

This aspect received different opinions from the respondents who indicated that not all the officials are employed without skills. Some are employed with skills but are corrupted by the system more specifically the service providers who bribe the officials who are supposed to monitor and ensure that the appropriate service is provided to the people. In some instances, such people are instructed by their seniors to ensure that the service provider is paid within a specific period. These can be coupled with the theme of **theft** and **white-collar crime**, which have turned into a culture now. This is supported by the sentiments of the South African President Cyril Ramaphosa, when indicating that, “corruption took a great toll on the South African society and its economy eroding constitutional values and undermine the rule of law” (Naki, 2021:3).

The other theme was **planning**, which is mostly done by the senior officials in the municipality, but they get discouraged and disturbed by the politicians who are seen to be interfering in administration. Some responses indicated that, when the officials try to put appropriate administration, they are charged and get frustrated either by obliging or undergoing disciplinary hearings which ultimately gets them out of the system. This starts to question the literature aspects on the rule of law, Malan (2014) espoused that, South Africa is characterised by constitutional supremacy, meaning that there is no one who is above the law.

When planning, the municipalities should adhere to the laws of the country emanating from the South African Constitution which provides for the basic rights of all the people. The key legislative laws govern and regulate the municipal population including the workers on issues not only limited to vote casting but, also include the freedom of speech and participation in activities such as demonstrations and protests within the confines of the law if the citizens feel their rights have been violated (Mpehle, 2012:216). Ndlovu (2016:36) indicated that the failure to adhere to the legislations will undermine democratic institutions and pose a threat to the rule of law.

Legally, the right to water is espoused by the United Nations as it states that everyone should, “have access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use”. The right to sanitation forces all the human beings to have tangible and affordable access to sanitation that is safe, hygienic, secure, culturally acceptable, provides privacy and ensures dignity to all the users in all the spheres of life (UN Water, 2018:2).

Looking at the discussion above, the theories that were chosen are in line with both theory and the responses from the sample. The theory of rising expectation stresses that the people are eager for more once they achieve one aspect. Based on the promises done by the politicians during the municipal elections, the people get hope from what has been promised more especially when it is prioritised in the IDP during the consultations. Failure to implement the manifesto is regarded as a crime.

Mpehle (2012:214) indicated that service delivery is central to the freedom which cannot be enjoyed while fellow South Africans have no clean water, have no sanitation and are still using the bucket system. It is therefore very important that all the spheres of the government combine their efforts to ensure the speedy implementation of programmes around these basic services.

The findings from both the literature and the interviews discovered that the management agencies were not properly constituted. In the Capricorn District Municipality, the catchment management agency is riddled with corruption, the misappropriation of funds, poor control mechanisms and the inappropriate use of financial resources despite the existence of the board. The respondents indicated that there seems to be a cartel running the institution for personal gain with a high budget failing to provide people with sufficient water. The lack of infrastructural knowledge is also a worrying factor because when there is a breakdown, the largest part of the residents has to suffer because the main hole has to be closed.

Looking at the **public choice theory**, it is clear from the discussions of both the literature and the respondents that most of the officials and politicians use the information acquired in confidence to position their own friends and companies so that they will benefit from the vital information which is supposed to be secretly kept. In a way, this is proof that most people in the municipality are for their own personal

gain and want proximity to resources. Seemela and Mkhonto (2007:204); Ngwakwe (2012:314) and Manyaka (2014:136), espoused that the local government is a place of competing groups who are fighting for power and resources for personal gain or political godfatherism.

Philosophy of servant leadership- This philosophy is mostly ignored in most of the municipalities because the application requires that the people should be respected, and they must be serviced with dignity, honesty and fairly. For instance, in modern day political administration, it is found that most of the leaders in the local government both political and administrative deceive the people who entrusted them with the political or administrative office by doing favors to their preferred candidates in siphoning jobs, services and leaking information to their own benefit despite having signed oath of secrecy (Asamoah, 2018:84).

Agency theory - In the application of the study, the Auditor General seems to be an agent of the South African people. The municipality in some cases received a clean audit which did not automatically translate to appropriate water and sanitation provision on the ground. Literature states that, “Agency theory is relevant for the situations wherein one party (the principal) delegates authority – in terms of control and decision-making about certain tasks – to another party (the agent)” (Fayezi, O’Loughlin & Zutsh, 2012:556).

7.2 Research problem, question, investigative sub question and objectives

The literature which provided secondary data and the research guide which provided empirical data managed to address the following:

7.2.1 Research problem

The Capricorn District Municipality as a water service authority is facing water and sanitation challenges due to theft, ageing infrastructure, and the rapid loss of water quality. Poor water and poor sanitation service delivery compromises the people’s rights, and it devalues their dignity and attracts unrests in the communities.

Most of the wastewater treatment plants are in a serious state of decay, due to the poor planning that is shown by high effluent volumes, poor operation and maintenance of wastewater, staff incompetency, as well as due to dilapidated sewage treatment infrastructure (lack of proper infrastructural investment). Poor planning accompanied by poor operation and maintenance might also lead to the poor enforcement of environmental laws (flouting of policies). Failure to adhere to the effluent laws leads to the pollution of water resources upon which most rural communities' inhabitants rely on for their daily chores. Consequently, there is a direct negative impact on; human health, the environment, the ecosystem, and there is also the contamination of water resources that are the main sources of clean water for the Capricorn District Municipality's inhabitants.

7.2.2 7.2.2 *Research question*

- The research questions read as follows: What is the origin of the inefficient delivery of clean water and sanitation to the citizens of the Capricorn District Municipality?
- What is the role of the Catchment Management Agencies in the provision of clean water in the Capricorn District Municipality?
- How effective is the cost management system of water conservation and sanitation management?
- How can the supply of water and sanitation to the citizens of the Capricorn District Municipality be improved, to ensure efficiency and effectiveness?

7.2.3 *Aim of the research*

The research aim was to examine the reasons of continuous inefficient sanitation and the insufficient clean water supply post-apartheid government in the urban and rural communities of the Capricorn District Municipality.

7.2.3.1 *Investigative sub – question*

- ❖ Are there water taps in the area you live in?
 - Are they in the yards or in communal areas?
 - How often do you receive water from those taps?
 - Are the ablution facilities based on water / sewage or septic tanks?

- If based on the septic tanks, how often does the municipality empty them?

- ❖ Do you live in the urban or rural area?
 - Do you pay for water and sanitation services?
 - Are there water meters in the yards?
 - **Rural:** Is the latrine lined or not?
 - Does the municipality help with emptying the toilets when full?
 - How much do you pay for those services?
 - Is the water pumped using (generator / electricity) from the local area or is it supplied through pipes from the bulk supply?

- ❖ In your opinion, how do you think these services can be improved?

- ❖ Are all the local municipalities receiving portable water within the district?
 - Those that do are their wastewater treatment plants effluent clean to recharge the water sources?
 - How is the staff compliment in those localities?
 - What qualifications are the staff members possessing at the WWTP or those dealing with water in the municipalities?
 - How is the state of sanitation in the municipality?

- ❖ How is the state of the Catchment Management Agencies (CMA) in the provision of clean water within the district?
 - How is the maintenance of infrastructure currently, given the increasing demand of water due to population growth?

- ❖ Are the municipalities paying for the water they receive from the CMA?
 - Are the communities paying for the services they receive?

- ❖ In your opinion, how can these services be improved?

7.3 Theoretical and conceptual framework

The two main concepts that formed the basis of the literature review and a discussion on the service delivery challenges in the provision of sustainable sanitation and clean water: The case of Capricorn District Municipality, Limpopo Province, South Africa, introduced the factors that enabled the research to develop a theoretical and conceptual framework.

7.4 Methodological framework

Chapter 3 of the study drew the methodological framework which the research methodology developed from the rationalist philosophical assumption based on subjective epistemology. The rationalist philosophy is based on René Descartes's (1596–1650) assumption that rationalism is the philosophical knowledge that is acquired through reason, without the aid of the senses. This view differed from Plato and other philosophers who followed in the Platonist tradition during the mid-seventeenth century, who defined rationalism as a unique twist holding a view that our most important mental concepts are innate, or inborn, and from these we deduce other truths with absolute certainty (Fieser, 2020).

Rationalism claims that there is "*priori truth*" waiting to be discovered (Bernard, 2011:3). Chapter 1 projected that sustainable sanitation and clean water are core factors in service delivery. 'Poor water and poor sanitation service delivery compromises the people's rights, devalues their dignity, and attracts unrests in the communities'. The study made this statement at the beginning to show the 'prior truth', hence it commenced with the core concepts as poor water and poor sanitation. These concepts made way to acquiring the empirical study that will show the results in depth. The empirical study was conducted dominantly through interviews and through the filling of the research guide on matters of biographical information to determine service delivery to the sampled population.

The paradigm that was followed was phenomenological when conceptualising the discussion based on the qualitative research method as described in detail in Chapter 4. Furthermore, the study adopted the methodological framework such as the beliefs about the nature of reality (ontology) and the relationship between the knower and the known (epistemology). Ontologically, the research followed the

Heraclitan perspective of a fluxing social reality. The ontological question that the research asked was “*what can be known*” about the nature and form of reality regarding the provision of sustainable sanitation and the provision of clean water.

The research sought to find out the reality about improving people’s lives. The epistemological approach seeks “*knowledge as personal, subjective and unique*” and obliges the researcher to be involved with the subject (Cohen, Marion & Morrison, 2007:7). Furthermore, the research followed the phenomenological approach to “*encompass diverse interpretations and philosophical positions*” (Howel, 2013:32).

7.5 Development of research instruments

The research instrument is made of questions covering four aspects of research regarding the state of service delivery on water and sanitation; the staff compliment and the skills; the state of the CMA in the provision of clean water within the district; the infrastructural maintenance; cost management of services provided and the need to have inputs on how the services can be improved. The intention was to obtain the perception from the respondents on these concepts.

The questions were categorised per investigative question and the sub-questions to address the elements of the components that build the conceptual framework. The research instrument questions and sub-questions from the research instrument managed to collect information based on the perceptions of the people within the Capricorn District Municipality.

7.5.1 Sampling strategy

The researcher applied the purposive sampling method from the identified sample of people who were perceived to have appropriate information regarding the phenomenon. The respondents further helped the researcher to reach some of the respondents in a snowball method who had more information which helped the research to reach the saturation point. The saturation point of the study was realised when no information was received from the 100 respondents while the research originally targeted 45 respondents.

7.5.2 Description of the research procedure

An interview guide was developed and utilised in the empirical data collection. The interviews were held with different respondents face to face and others opted for interviews over the telephone due to their busy schedules.

7.6 General summary

This section discusses the general summary of this thesis from Chapter 1 to Chapter 7.

Chapter 1 outlined the research background that explained the Service delivery challenges in the provision of sustainable sanitation and clean water: The case of Capricorn District Municipality, Limpopo Province, South Africa. This research established that there is an intense inhibitor of service delivery in relation to the raised topic.

The various concepts that are regarded in this research as the contributing factors to the concept of providing clean water and sustainable sanitation through the theoretical framework and interrogation of literature are outlined in Chapter 2. The theory helped to find the solutions to the research questions and the research objectives.

The empirical literature review where various sources of literature such as books, journals, periodicals, and online sources were considered to address the research questions and the research problems that lead to the findings of the research and finally draw a comparison to the conclusions was discussed in Chapter 3.

Chapter 4 outlined the research methodology, the research methods, the research design, the sampling techniques, the population, the sampling, the ethical issues related to sampling, data collection methods and data analysis. This chapter helped the research to find out the problems and the issues inhibiting the provision of clean water and sustainable sanitation. In so doing, it helped to acquire purposive sample which gave answers to the questions that were raised in the research.

Chapter 5 emanated from Chapter 4 as it gave the analysis to the answers from the research sample. The chapter was also derived from the research results, and it tested the fulfilment of the research objectives from the theories, the literature review, and the conducted interviews.

REFERENCES

- Abdulai, R.T. & Owusu-Ansah, A. 2014. *Essential Ingredients of a Good Research Proposal for Undergraduate and Postgraduate Students in the Social Sciences*. Sage open, July – September. p1-15.
- Abrahams, G. 2017. *Polokwane Municipality: A secondary city with a 2030 vision*. SA City Network.
- Adom, D., Hussein, E. M. and Agyem, J. D. 2018. Theo vertical and contextual framework: mandatory ingredients of quality research. *International journal of science research*. 7(1).438 – 441.
- Africa Check. 2014. *SONA claims revisited: Zuma on service delivery*. 12 February. <https://africacheck.org/reports/2014-sona-claims-revisited-zuma-on-service-delivery/>. Accessed, 30 July 2020.
- AGSA. 2022. Status of material irregularities in national, provincial, and local government. 15 April 2022. <https://www.agsa.co.za/Reporting/SpecialAuditReports/MaterialIrregularities.aspx>. Accessed, 20 August 2022.
- Akianboade, O. A., Mokwena, M. P. and Kinpack, E. C. 2013. Understanding citizens' participation in service delivery protests in South Africa's Sedibeng district municipality *International Journal of Social Economics*. 40(5). 458-478.
- Akintoye, A. (2015). *Developing Theoretical and Conceptual Frameworks*. Jedm.oauife.edu.ng/uploads/2017/03/07 (accessed 2017 February 22)
- Algotsson, E. and Murombo, T. 2009. *Water supply and sanitation in South Africa: Environmental rights and municipal accountability*. LHR publication series. 1/2009.
- AMCOW. 2015. *Water supply and sanitation in South Africa, turning finance into services for 2015 and beyond*.
- ANC. 2022. 6th Policy conference report. 28 – 31 July. Nasrec, Gauteng.

- Anfara, V. A and Mertz, N. T. 2014. Theoretical frameworks in qualitative research. 2nd edition. California. Sage publications.
- Antwi – Agyel, P. 2009. *Faecal sludge management: the case of Madina*. MSC Thesis. Kwame Nkrumah University of science and technology.
- Asamoah, G. 2018. Understanding servant leadership. Interdisciplinary research journal of theology, apologetics, natural & social sciences. 1(1&2), 81 – 110.
- Balkaran, S. 2014. *Governance in Water Conflict Management in South Africa: Is There A Case for A Constitutional Review? Journal of Public Administration* (49)(1): 19-31.
- Battersby, J. D. 1988. *Blacks pressing a rent boycott in South Africa*. Newyork times Archives, 22 February. <https://www.nytimes.com/1988/02/22/world/blacks-pressing-a-rent-boycott-in-south-africa.html>. Accessed, 27 July 2020.
- Bernard, H. R. 2011. Research methods in Anthropology: Qualitative and Quantitative Approaches. 5th Edition. United Kingdom. Alta Mira Press.
- Beyers, L. J. E. 2016. Service Delivery Challenges Facing Municipalities: A Case Study of Fetakgomo Local Municipality in Sekhukhune District Municipality, Limpopo Province. *Bangladesh e-Journal of Sociology*. 13 (2). 167 - 178.
- Blumm, M. C. 1994. *An agricultural law research article: Public choice theory and the public lands: why ‘multiple use’ failed*. 18 Harv. Envtl. Rev. 405. p405 - 432.
- Bhandari, P. 2020. *Population v/s sample: what’s the difference*. <https://www.scribbr.com/methodology/population-vs-sample/>. Accessed 20 June 2021.
- Bohler-Muller, N., Davids, Y. D. and Roberts, B. 2016. *Service Delivery Challenges in South Africa South African Social Attitudes Survey (SASAS)*. Pretoria. Human Sciences Research Council.
- Bond, P. and Mottiar, S. 2012. The Politics of Discontent and Social Protest in Durban, Politikon, South African Journal of Political Studies. 39(3), 309-330.

- Boyne, G. A. 1997. Public choice theory and local government structure: an evaluation of reorganisation in Scotland and Wales, *Local government studies*. 23(3). 56 - 72.
- Bryman, A. 2012. *Social research methods*. Oxford university press.
- Bryman, A. and Bell, E. 2007. *Business Research Methods*, 2nd edition. Oxford University Press.
- CBC News, 2010. Inside Walkerton: Canada 's worst ever E.Coli contamination, the shock, the investigation, and the aftermath. CBC 's Journalistic standard and practices. **Error! Hyperlink reference not valid.** Accessed 18 February 2020.
- CDM. 2020. *2019/2020 Final IDP / Budget reviewed: 2016/17 - 2020/21 Integrated Development Plan*. Polokwane. Capricorn District Municipality.
- Cele, S. 2021. ANC loses grip on key South African cities after election setback. Africa newsletter, 23 November.
- Chakwera, L. M. 2021. Accelerating the change Malawians fought for State of the Nation Address. Lilongwe. Republic of Malawi.
- Chakwera, L. M. 2022. The National Anti – corruption conference. Blantyre. Malawi
- Chen, L., Dean, J., Frant and Kumar, R. 2014. *What Does "Service Delivery " Really Mean?*, World Policy Blog. Available at: <http://www.worldpolicy.org/blog/2014/05/13/what-does-service-delivery-really-mean> (Accessed: 07 April 2020).
- Cohen, L. Manion, L. and Morrison, K.2007. *Research Methods in Education*. 6th Edition. New York. Routledge Taylor & Francis Group.
- Cooperative Governance Traditional Affairs (Cogta), 2021. How is the district development model aligned to the integrated urban development framework? 30 August. <https://www.cogta.gov.za/index.php/2021/08/30/how-is-the-district-development-model-aligned-to-the-integrated-urban-development-framework/#:~:text=The%20framework%20will%20steer%20urban,reversing%20the%20apartheid%20spatial%20legacy> .Accessed, 21 April 2022.

- City of Cape Town. 2017. *Water Services Development Plan-IDP Water Sector Input*.
- Compton, H. 2021. What is water theft? Everything you need to know. Thrive June 16. <https://blog.strive2thrive.earth/water-theft/>. Accessed, 8 August 2022.
- Cosgrove, W. J., and D. P. Loucks, D. P. 2015. *Water management: Current and future challenges and research directions*, *Water Resour. Res.*, 51, 4823–4839, doi:10.1002/2014WR016869.
- DBSA, The impact of municipal infrastructure in basic service delivery in South Africa. Development Bank of Southern Africa. <https://www.dbsa.org/article/impact-municipal-infrastructure-basic-service-delivery-south-africa>. Accessed, 27 September 2022.
- Dennis, B., Carspecken, L., & Carpecken, F. 2013. *Quantitative research: a reader in philosophy, core concepts and practice*. New York. Peter Lang publishing.
- De Waal, A. and Sivro, M., 2012. 'The relation between servant leadership, organisational performance, and the high- performance organization framework', *Journal of Leadership and Organizational Studies* 19(2), 173–190. <https://doi.org/10.1177/1548051812439892>
- Dinesh, J. 2016. *Malls, buying decision process*. <http://hdl.handle.net/10603/97412>. Accessed, 10 March 2020.
- Du Preez, H., Toerien, A. and Dama-Faki, P. 2013. *uThukela water infrastructure refurbishment: A case study. Report to the Water Research Commission and Department of Water Affairs*. WRC Report No. TT 480/12. Golder Associates Africa (Pty) Ltd. Gezina.
- Department of Water Affairs and Forestry (DWAF). 2004. National Water Resource Strategy. Department of Water Affairs and Forestry, Pretoria, South Africa.
- Department of Public Works. 2012. *Small Wastewater treatment works DPW design guidelines*. Pretoria. Government Publications. Dipholo, B.K. 2014. *Journal of Educational and Social Research*. 4(6). 43 – 50. September 2014

- Egbert, J. and Sanden, S. 2014. *Foundation of education research: understanding theoretical components*. New York. Routledge.
- Erasmus, N. 2020. *Mankweng: Council writes off R320,6m*. Polokwane Observer. July 03.
- Fayezi, S., O'Loughlin, A. and Zutshi, A. 2012. Agency theory and supply chain management: a structured literature review. *Supply Chain Management: An International Journal*. 17(5). 556–570.
- Fieser, J. 2020. Continental rationalism: From *The History of Philosophy: A Short Survey*. <https://www.utm.edu/staff/jfieser/class/110/7-rationalism.htm>. Accessed, 18/08/2022.
- Furlong, K. 2012. *Good water governance without good urban governance? Regulation, service delivery models, and local government*. *Environment and Planning A*. 44. p. 2721 -2741.
- GCIS. 2016. *South Africa Yearbook 2015/16: Water and Sanitation*. <https://www.gcis.gov.za/sites/default/files/docs/resourcecentre/yearbook/WaterSanitation-SAYB1516.pdf>. Accessed, 14 May 2022.
- Gcora, N. and Chigoma, W. 2019. Post – implementation evaluation and challenges of integrated financial management information systems for municipalities in South Africa. *South African Journal of Information Management* 21(1): 1-12.
- Gladwin, C. 2018. *Municipal mysteries: When “actuals” aren’t “actuals”*. <https://www.golegal.co.za/water-electricity-municipality-readings/>. Accessed, 28 July 2020.
- Goundar, S. 2019. *Research Methodology and Research Method*. <https://www.researchgate.net/publication/333015026>. Accessed, 8 August 2022.
- Grady, J. O. 2010. *System verification: proving the design solution satisfies the requirements*. Academic press. USA.
- Grant, C. and Osanloo, A. 2014. *Understanding, Selecting, and Integrating a Theoretical Framework in Dissertation Research: Creating the Blueprint for*

- 'House'. *Administrative Issues Journal: Connecting Education, Practice and Research*: 12 – 22 DOI: 10.5929/2014.4.2.9.
- Green, H. 2014. Use of theoretical and conceptual frameworks in qualitative research. *Nurse Researcher*. 21(6). 34 - 38.
- Greenleaf, R. K. 1970. *Servant leadership: A journey into the nature of legitimate power and greatness*. Paulist Press. New York.
- Güles, N. 2021. *Tracking billions blown by towns: Auditor general still has hope in spite of depressing report*. *Sunday Times*. 04 July. p8.
- Gumede, W. 2022. Try tackling real issues instead of dancing around R22m flag. *Sunday Times*, May 22.
- Hanyane, B. R. and Nkgabe, B. N. 2012. *Second take on the 'open toilets politics': the case of Rammulotsi township in Viljoenskoon in the Free State*. *Journal of Public Administration* (47)(4): 728 - 745.
- Hanyane, B. and Naidoo, G. 2015. *Municipal Employees' Perceptions of Service Delivery in Limpopo-South Africa: A Critical Need for Good Governance*. *Journal of Human Ecology* (51)(3): 241-249, DOI: 10.1080/09709274.2015.11906918
- Hassan, M. A. ud. Examination and evaluation system of primary education. Indiana University. Somalia.
- Hernández-Sancho, F., Birguy Lamizana-Diallo, B., Mateo-Sagasta, J. and Qadir, M. 2015. *Economic Valuation of Wastewater - The cost of action and the cost of no action*. United Nations Environment Programme. <http://unep.org/gpa/Documents/GWI/Wastewater%20Evaluation%20Report%20Mail.pdf>. Accessed, 27 July 2020.
- Heyns, M., McCallaghan, S. and Newton, D., 2020, 'An assessment of servant leadership at a business unit of a South African power utility', *Journal of Local Government Research and Innovation* 1(0), a18. <https://doi.org/10.4102/jolgri.v1i0.18>.
- Howell, K. E. 2013. *An introduction to the philosophy of methodology*. London. Sage publications.

- HSRC. 2016. Service Delivery Challenges in South Africa: South African Social Attitudes Survey (SASAS), COMPENDIUM OF RESULTS. Pretorius Street, Pretoria.
- Human Rights Commission. 2014. *Report on the Right to Access Sufficient Water and Decent Sanitation in South Africa*: South African Human Rights Commission. Pretoria. Republic of South Africa.
- Igbokwe-Ibeto, C. J., 2019. 'African bureaucracy and public administration: Analysing the normative impediments and prospects', *Africa's Public Service Delivery and Performance Review* 7(1), a323. <https://doi.org/10.4102/apsdpr.v7i1.323>
- IRC, 2013. Sustainable Water and Sanitation Services: The Life-Cycle Cost Approach to Planning and Management. Routledge. New York.
- Jayte, M. 2017. PM Hassan Khayre: Putting the cart in front of the horse. https://www.hiiraan.com/op4/2017/apr/141562/pm_hassan_khayre_putting_the_cart_in_front_of_the_horse.aspx?fb_comment_id=1287802064649118_1306492116113446. Accessed, 09 September 2022.
- Kazeem, B. A., Yskandar, H. Bolanle, T. A. and Adnan, M. A. 2017. *Leakage Detection and Estimation Algorithm for Loss Reduction in Water Piping Networks*. Water (9): 773.
- Kanjere M. M. 2017. Ontological and epistemological challenges faced by female researchers when conducting gender-based research: An agenda for transformation. *Journal of Public Administration*. 52 (1.1): 189 – 198).
- Kgatle, M. S. 2018. 'Servant leadership: An urgent style for the current political leadership in South Africa', *Verbum et Ecclesia* 39(1), 1–12. <https://doi.org/10.4102/ve.v39i1.1815>
- Kings, S. 2015. *Politics results in filthy water: Sewer flows because of misplaced trust in local government and in co-operative governance*. Mail & Guardian. August 7 -13.

- Kings, S. 2020. Water theft: Thirty years of looting. Mail & Guardian. February 28. <https://mg.co.za/article/2020-02-28-water-theft-thirty-years-of-looting/>. accessed 08 August 2022.
- Kivunja, C. 2018. Distinguishing between Theory, Theoretical Framework, and Conceptual Framework: A Systematic Review of Lessons from the Field. *International Journal of higher education*. 7(6): 46 – 53.
- Koma, S. B. 2010. *The state of local government in South Africa: issues, trends and options*. *Journal of Public Administration*. 45 (1.1): 111 – 120.
- Lawler, E. E., Mohrman, S. A. and Ledford, G. E. 1992. Employee involvement and total quality management. <http://www.questia.com/google scholar>. Accessed 14/05/2022.
- LHR Publication Series 1/2009. *Water Supply and Sanitation in SA – Environmental rights and Municipal Accountability*.
- Likhotal, A. 2013. *The future of water – strategies to meet the challenge*. *CADMUS*. (2)(1): 85 - 92.
- Locke, L. G. 2019. The clay feet of servant leadership. *JBIB*. 22 (1): 34 – 42.
- Lockwood, H and Smits, S. 2011. Supporting rural water supply. Practical Action Publishing Ltd. United Kingdom.
- Lovuno, L. L and Mokoena, S. K. 2019. Configuring African Administrative culture in a society of mistrust and turmoil: The choice of internationalizing or Africanizing administrative behavior in African governments. *Journal of Public Administration*. 54(2) 261 - 276.
- Lučić, D., Radišić, M and Dobromirov, D. 2016. *Causality between corruption and the level of GDP*. *Economic Research-Ekonomska Istraživanja*, (29)(1): 360-379, DOI:10.1080/1331677X.2016.1169701.
- Luhanga, P. 2019. *Proud cleaner of Cape sewers finds dead dogs, cats and human fetuses*. The Citizen. 29 October. p. 8.
- Luu, I.Q. and Halog, A. 2016. *Sustainability in the Design, Synthesis and Analysis of Chemical Engineering Processes*. Science Direct. p 327 – 352.

- Lüthi, C, Panesar, A., Schütze, T., Norström, A., McConville, J., Parkinson, J., Saywell, D. and Ingle, R. 2011. *Sustainable Sanitation in Cities: A Framework for Action*. The Netherlands. Papiroz Publishing House.
- Mabena, S. 2022. R500m water waste. The Citizen. 11 May. P3.
- Mabotha, P. A. P., 2019. *Faecal sludge production and management projections in the city of Polokwane, South Africa*. Master of Public Administration & Management Dissertation, Faculty of Management and Law, Graduate school of leadership. University of Limpopo.
- Mabotha, P. A. P., Netswera, F.G. and Ganda, F. 2019. *Faecal Sludge Management and Improvement of Water Usage Within the Municipality of Polokwane*. The 4th Annual International Conference on Public Administration and Development Alternatives 03 - 05 July, Johannesburg, South Africa.
- Makhafola, G. 2022. R1m to translate bylaws. The citizen. 11 May. p8.
- Mathenge, G. D. 2014. An Empirical Study to Measuring Corruption and Integrity in Kenyan Police Agency: An Ethical Perspective, Public Policy and Administration Research. 4. 67-79.
- Mdlongwa, E. T. 2014. Local government at the heart of poor service delivery. Public Service Accountability Monitor. RJR 34.
- Madubela, A. 2021. Mbeki: Social compact the answer to promises made in ANC election manifesto. Mail & Guardian. October 22. <https://mg.co.za/business/2021-10-22-mbeki-social-compact-the-answer-to-promises-made-in-anc-election-manifesto/>. Accessed 01 September 2022.
- Madumo, O. S. 2015. Developmental Local Government Challenges and Progress in South Africa. *Administratio Publica*. 23(2). 153 -166.
- Morudu, H. D. 2017. Service delivery protests in South African municipalities: An exploration using principal component regression and 2013 data. *Cogent Social Sciences*. 3 (1329106). 1 – 15.
- Majekodunmi, A. 2012. *The state of local government and service delivery in Nigeria: challenges and prospects*. Nigeria. University of Lagos.

- Malan. K. 2014. Reassessing judicial independence and impartiality against the backdrop of judicial appointment in South Africa. *PER / PELJ* 2014(17)5.1965 – 2040.
- Mateo-Sagasta, J., Raschid-Sally, L. and Thebo, A. 2015. *Global wastewater and sludge production, treatment and use*. In. Drechsel, P. Qadir, M. and Wichelns, D. (eds.). *Wastewater: Economic asset in an urbanizing world*. Springer International Publishing.
- Manyaka, R. K. 2014. *Collection of municipal own revenue in South Africa: Challenges and Prospects*. *Journal of Public Administration*. 49(1): 127 - 139.
- Manyaka, R. K. 2018. *Making sense of community protests in South Africa: issues for consideration*. *Journal of Public Administration* (53)(1): 52-63.
- Manzini, S. 2016. The views of government officials on the Integrated Development Plan as a framework for local government that is developmental and responsive to peoples' needs [Gauteng]. School of Architecture and Planning University of the Witwatersrand, Johannesburg.
- Masango, R. S. and Mfene, N. 2017. *Inculcating values of the constitution in Public Administration and the society: A South African perspective*. *Journal of Public Administration* (52)(3): 589 – 600.
- Masindi, V. and Dunker, L. C. 2016. *State of water and sanitation in South Africa*. CSIR Built environment. Pretoria.
- Masindi, V. and Dunker, L. C. 2016. *State of water and sanitation in South Africa*. Council for Scientific and Industrial Research, South Africa.
- Mayisa, T. Davids, Y.D. and Mangai, M.S. 2019. Theoretical and Empirical Researches in Urban Management, Research Center in Public Administration and Public Services (14)(2): 20 – 40.
- Maqoko, Z. and Asmah – Andoh, K. 2019. Overcoming the Uneasy Political and Administrative Interrelationship for Effective Governance in a Municipality. *Administratio Publica*. 27 (4). 69 – 87.

- Mbanjwa, X. 2015. *More municipalities dishing out tenders to officials, families*. City Press. 06 July. <https://city-press.news24.com/News/More-municipalities-dishing-out-tenders-to-officials-families-20150607>. Accessed 08 March 2020.
- Mbeki, V. and Phago K. 2014. *Engagement of the Lephalale local municipality and its community on water services: A preliminary analysis*. *Journal of Public Administration* (49) (1): 206 – 216.
- Mccarthy, A. 2020. Turning crisis into opportunity? The Syrian refugee crisis and evolution of welfare policy for refugees in Turkey from a public choice theory perspective. *Critical social policy*. 00(0). 1 – 16.
- Mckenzie, R. S. 2002. *Khayelitsha Leakage Reduction Through Advanced Pressure Control*. MIESA Monthly Magazine, *Journal of the Institution of Municipal Engineering of Southern Africa* (27)(8): 43-47.
- Mdluli, D. 2019. *Senior managers are key in delivering services 100%*. Capricorn Voice. 13-19 November, p2.
- Mensah, R. O., Agyemang, F., Acquah, A., Babah, P. A. and Dontoh, J. (2020). Discourses on Conceptual and Theoretical Frameworks in Research: Meaning and Implications for Researchers. *Journal of African Interdisciplinary Studies*, 4(5), 53 – 64.
- Mills, G. 2012. *Why Africa is poor: And what Africans can do about it*. Penguin random house. South Africa.
- Mino, T. and Hakani, K. 2013. *Environmental leadership capacity building in higher education experience and lessons from Asian program for incubation of environmental leaders*. Springer Tokyo Heidelberg. New York Dordrecht London.
- Mishra, S. B. and Alok, S. 2019. *Handbook of Research Methodology A Compendium for Scholars & Researchers*. EDUCREATION PUBLISHING. Website: www.educreation.in. accessed, 08 August 2022.
- Mitchell, S. A., de Wit, M. P., Blignaut, J. N. and Crookes, D. 2014. *Waste water treatment plants: The financing mechanisms associated with achieving*

Green Drop rating. Report to the Water Research Commission. WRC Report No. 2085/1/14. Gezina.

Mohlala, G., Phago, K. G. and Mpehle, Z. 2014. *Management training and development – A case study of the Greater Tubatse Local Municipality. Journal of Public Administration* 49(1): 217 – 228.

Molale, T. B. 2019. Participatory communication in South African municipal government: Matlosana local municipality's Integrated Development Plan (IDP) processes. *Journal of communication sciences in Southern Africa*. 38(1).

Molefe, T. 2014. *Constitutional crisis for the taps to flow, government needs to end the sunset clause on local autonomy*. City Press – Voices, 2 February, p30.

Molefe, R. 2022. Polokwane water crisis: Mayor threatens to withhold payments to water board. 27 September. News 24.

Monroe, M. 2014. *The power of character in leadership: how values, morals, ethics, and principles affect leaders*. Whitaker house. USA.

Moyo, T. 2017. *Data collection instruments in research: An ontological and epistemological reflection. Journal of Public Administration* 52 (1.1): 285 – 294.

Mpe, M. J. 2019. *State of the district address by the executive mayor of Capricorn District Municipality his worship, Councillor John Mpe, Seakamela traditional authority, Blouberg Municipality*. CDM. Polokwane.

Mthombothi, B. 2022. SA has been brought to its knees by a tired, soulless government that shows no signs of stopping the rot. Sunday Times, May 22.

Muller, A. M. 2014. *Constitutional crisis – for the taps to flow, government needs to end the sunset clause on local autonomy*. City press – Voices, 2 February, p30.

Muller, A. 2019. *Panic over water in Gauteng is misplaced*. Mail & Guardian. 30 October. <https://mg.co.za/article/2019-10-30-00-panic-over-water-in-gauteng-is-misplaced/>. Accessed, 20 February 2020.

- Municipalities.co.za. 2019. *Capricorn District Municipality (DC35)*. Viewed, 31 October 2019, from <http://www.municipalities.co.za>.
- Mzangwa, S.T. 2017. *The spiral downfall of the African National Congress voter turnout during the 2016 Local Government elections: Effects of inconsiderate leadership*. Ed. Sebola, M.P. *Local government elections, politics & administration*. Batalea Publishers. Polokwane.
- Naderifar, M, Goli, H and Ghaljaie, F. 2017. Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research. *Strides Dev Med Educ*. 14(3). 1 – 6.
- Naki, E. 2021. ANC different beast today. *The Citizen*. April 29.
- Natarajan, A. 2011. *Rising expectations, social unrest, and development*. *CADMUS*, 1(3). 88-89.
- National Treasury. 2011. *Local government budgets and expenditure review*. Department of Finance. Pretoria.
- Ndebele, C., and Lavhelani P.N. 2017. *Local Government and quality service delivery: an evaluation of municipal service delivery in a local municipality in Limpopo province*. *Journal of Public Administration* (52)(2): 340 – 356.
- Ndenze, B. 2021. Failure of govt 's District Development Model blamed on ANC infighting. Eyewitness news. <https://ewn.co.za/2021/10/13/failure-of-govt-s-district-development-model-blamed-on-anc-infighting>. Accessed, 01 September 2022.
- Ndevu, Z and Muller, K. 2018. A Conceptual Framework for Improving Service Delivery at Local Government in South Africa. *African Journal of Public Affairs* (10)(4): 181 – 195.
- Ndou, S. D. and Sebola, M. P. 2017. *Local government administration and management in South Africa*; in Sebola, M.P (eds), *Local government elections, politics, and administration*: 198 – 214. Batalea Publishers, Polokwane.

- Nemambula, P. 2014. Violent Service Delivery Protests in the Governance of Public Participation in a Democratic South Africa. *Mediterranean Journal of Social Sciences*. 5(9). 148 – 151.
- News 24. 2018. *City of Cape Town down the sewer*. 25 July. <https://www.news24.com/MyNews24/city-of-cape-town-down-the-sewer-20180723>. Accessed, 10 November 2019.
- Ngwakwe, C. C. 2012. *Public sector financial accountability and service delivery*. *Journal of Public Administration* 47(4)(1): 525 – 537.
- Nkuna, N. W. and Sebola M.P. 2015. Developmental local government and the state of Public Administration theoretical discourse in South Africa; in Sebola, M.P (eds), *Local government elections, politics and administration*, pp. 198 – 214. Bataela Publishers, Polokwane
- Nwankwo, B. C., Ocheni, S. and Atakpa, M., 2012, 'Re-engineering organisational success through effective leadership', *European Journal of Business and Social Sciences* 1(3), 119–130.
- Nxumalo, L. 2016. *Jubilation as Polokwane writes off millions owed by protesting residents*. City Press. 18 February.
- Odendaal, A. 2016. *South Africa 's incomplete peace*. Ed. Richmond, D.P. Pogodda, S & Ramovic, J. *The palgrave handbook of disciplinary and regional approaches to peace*. United Kingdom. Palgrave MacMillan.
- Olson, M. 1965. *The logic of collective action: Public goods and the theory of groups*. Cambridge: Harvard university press.
- Olver, C. 2018. *Patronage and politics in a South African city: A study of Nelson Mandela Bay*. Department of Political studies and public affairs research institute, University of Witwatersrand.
- Panda, B. and Leepsa, N. M. 2017. Agency theory: Review of Theory and Evidence on Problems and Perspectives. *Indian Journal of Corporate Governance*. 10(1). 74–95
- Parker, D. W., Dressel, U. Chevers, D. and Zeppetella, L. 2018. "Agency theory perspective on public-private-partnerships: international development

- project", International Journal of Productivity and Performance Management, <https://doi.org/10.1108/IJPPM-09-2016-0191>
- Patrick, A. 2021. Tracking billions blown by towns: 'I' m proud of our clean audit. A lot of discipline is involved. Sunday Times. 04 July. p8.
- Patrick, A. 2021. *Tracking billions blown by towns: Mangaung: a diary of collapse*. Sunday Times. 04 July. p8.
- Phadi, M, Pearson, J. and Lesaffre, T. 2018. *The Seeds of Perpetual Instability: The Case of Mogalakwena Local Municipality in South Africa*. *Journal of Southern African Studies*, DOI: 10.1080/03057070.2018.1464301
- Parveen, H. and showkat, N. 2017. *Data collection*. Research Gate. <https://www.researchgate.net/publication/319128325>.
- Prett, S. 2004. *Matching policies on rural development and local governance in South Africa: recent history, Principles, and current challenges*. Accessed, 11 March 2020.
- Pretorius, M. C. 2017. The Influence of Political and Administrative Interaction on Municipal Service Delivery in Selected Municipalities in the Free State Province. Unpublished Doctoral Thesis. Bloemfontein: Central University of Technology.
- Raadschelders, J. C. N. 2019. The future of public administration scholarship in South Africa and the world: Serving democracy, practice, and academe. Keynote speech at the 12th annual international conference, University of Pretoria, South Africa. 24 – 25 October.
- Rabaluka, G. 2014. The New Public Management and its Challenges in Africa. *Public Policy and Administration Research*. 4 (4). 85 -96.
- Ramaphosa, C. 2022. President Cyril Ramaphosa delivered his closing speech at the end of the African National Congress's sixth national policy conference. [<Files\6th_policy_conference_President_speech>](#) - Accessed. 01 August.2022
- RSA. 1996. *The Constitution of the Republic of South Africa*. Pretoria. Government Printers.

- RSA. 1997. *Water Services Act, Act No. 108 of 1997*. Pretoria. Government Printers.
- RSA. 2012. *National Planning Commission: National Development plan 2030*. Pretoria. Government Printers.
- Salvadori, M, I., Sontrop, J, M., Amit, X., Garg, Louise, M., Moist, Rita, SSuri and William, F. C. 2009. *Factors that lead to the Walkerton tragedy*. *Kidney International*. 75, (112): 533 – 534.
- Schreiner, B. 2015. *Water Pricing: The Case of South Africa*. In Dinar, A. & Pochat, V. Albiac, J. (eds.) *Water pricing experiences and innovations*. Springer International Publishing.
- Sebake, B.K. 2022. *The renewal and unity implications for the Anc ahead of the 55th national conference: A developmental state on the crossroads*. *Journal of Nation – building & Policy studies*: 6(2): 67 – 87.
- Sebola, M. P. *Local Government Administration in post-apartheid South Africa, some critical perspective*. Batalea Publishers. Polokwane.
- Seemela, P. and Mkhonto, X. 2007. *Fundamentals for good governance in the public sector*. *Journal of Public Administration*: 42(5): 200 – 211.
- Şener, M. Y. 2016 'Conditional Cash Transfers in Turkey: A Case to Reflect on the AKP's Approach to Gender and Social Policy'. *Research and Policy on Turkey* 1(2): 164–178. DOI: 10.1080/23760818.2016.1201246. Accessed 07 May 2022.
- Sharma, M. K. and Jain, S. 2013. *Leadership Management: Principles, Models and Theories*, *Global Journal of Management and Business Studies*. 3(3): 309-318.
- Sileyew, K. J. 2019. *Research Design and Methodology*. Open access books. <https://www.intechopen.com/online-first/research-design-and-methodology>. Accessed, 07 May 2022.
- Šimundić, A. 2013. *Lessons in biostatistics*. *Biochemia Medica*. 23(1): 12 – 15 <http://dx.doi.org/10.11613/BM.2013.003>. Accessed, 08/12/2022.

- SIWI, 2016. *Pricing instruments for sustainable water management*. Working paper 28. Sweden. Stockholm international water institute.
- Smith, J and Noble, H. 2014. Bias in research. *Evidence-Based Nursing*, 17 (4). pp. 100- 101. ISSN 1367-6539. Accessed.8/12/2022.
- Somekh, B and Lewin, C. 2012. *Theory and methods in social research*. 2nd edition. New Delhi. Sage publishers.
- Sookram, R. 2013. Environmental attitudes and Environmental stewardship: Implications for sustainability. *Journal of value-based leadership*. 6(5): 1 – 11.
- Stats SA. 2014. *Household Service Delivery Statistics*. Pretoria. Statistics South Africa.
- Saunders, M., Lewis, P., and Thornhill, A. (2012). *Research methods for business students*. Essex: Pearson Education Limited.
- Sutherland, C. Hordijk, H. Lewis, B. Meyer, C. and Buthelezi, S. 2014. Water and sanitation provision in eThekweni Municipality: a spatially differentiated approach. *International Institute for Environment and Development (IIED)*. 26(2): 469–488.
- Swanson, R. A. 2013. *Theory building in applied disciplines*. San Francisco, CA: Berrett-Koehler.
- Tempelhoff, J. W. N. Ginster, M. Mahabir, S. Jaka, H. Kruger, A. and Nkomo, L: 2021. Perspectives from below on Emfuleni 's wastewater woes: in search of resolving a wicked problem. Ed. Wessels, J.S, Potgieter, T and Naidoo, T. *Public Administration challenges: Cases from Africa*. Cape town. Juta & Company (Pty) Ltd.
- Terre Blanche, M., Durrheim, K., and Painter, D. 2006. *Research in practice: Applied methods in social sciences*. Cape Town: University of Cape Town.
- The Country. 2019. *Warning: Be careful when harvesting for North shellfish*. Pig Politics: Episode 1. 15 January.
- The East African News. 2022. Malawi 's President Chakwera names new cabinet. 27 January. <https://www.theeastafrican.co.ke/tea/rest-of-africa/malawi->

president-lazarus-chakwera-names-new-cabinet-3696254. Accessed 07 April 2022.

The Presidency. 2022. State of the nation address. February 10. Cape Town.

Thornhill, C. 1995. *Local Government: Government Closest to the People*. Pretoria: HSRC Publishers.

Tlhogane, E. M. 2018. *Implementing healthcare governance structures in a decentralised system in the North West Province of South Africa*. *Journal of Public Administration*: 53 (1): 64 – 73.

Tsheola, J. P. 2012. Theorizing a democratic developmental state: issues of public service delivery planning and violent protest in South Africa. *Journal of Public Administration*. 47(1):161-179.

Tshishonga, N. 2015. *Municipal managers and their critical role in local government and administration*. ed. Sebola, M.P. *Local government administration in post-apartheid South Africa*. Batalea Publishers. Polokwane.

Uhlman, K., Eden, S., Rock, C. Westfall, C. and Sprouse, T. 2012. *Effluent dependent streams of Arizona*. Arizona Cooperative Extension. Tucson. University of Arizona.

United Nations. 2020. The time is now, addressing the gender dimensions of corruption. United Nations office on drugs. Vienna. United Kingdom.

United Nations, Vision 2030, *Sustainable Development goals: clean water and sanitation*. Accessed, 18 November 2019.

UN-Human Settlements Programme. 2015. The Challenge of Local Government Financing in Developing Countries. UN-HABITAT. Kenya, Nairobi.

UN-Water. 2005 – 2015. *Water and Sustainable Development From vision to action: Means and tools for Implementation and the role of different actors*. Report of the 2015, Zaragogaconference. <http://www.un.org/waterforlifedecade/waterandsustainabledevelopment2015/index.shtml>. Accessed, 10 March 2020.

- Un-Water. 2018. Human rights to water and sanitation. <https://www.unwater.org>. accessed 15 November 2021.
- Van Wyk, A. 2015. *2014 SONA claims revisited: Zuma on service delivery*. Check Africa, 12 February. p1.
- Wessels, J. S, Kwaza, M. H and Ijeoma, E. 2021. Sustained poor audit outcomes: the case of the Amathole district Municipality, in Wessels, J.S, Potgieter, T & Naidoo, T, (eds), *Public Administration challenges cases from Africa*. Juta & company (Pty) Ltd. Claremont.
- Whittles, G. 2017. *State to discipline employees doing business with government*. Mail & Guardian. 31 January. <https://mg.co.za/article/2017-01-31-state-to-discipline-employees-doing-business-with-government/>. Accessed 08 March 2020.
- William, N. 2011. *Research Methods: The Basics*. Routledge. New York.
- Wisse, B. Rus, D. Keller, A. C and Sneeboos, E. D. 2019. "Fear of losing power corrupts those who wield it": the combined effects of leader fear of losing power and competitive climate on leader self-serving behaviour. *European Journal of work and organisational psychology*. 28(6). 742–755.
- Wu, Z., Farley, M., Turtle, D., Kapelan, Z., Boxall, J., Mounce, S., Dahasahasra, S., Mulay, M. and Kleiner, Y. 2011. *Water loss reduction*. 1st ed. Bentley Institute Press: Exton, PA, USA.
- WWD. 2018. *Fetus discovered at Waste water treatment plant in Georgia*. 10 May. . Accessed, 26 July 2020.
- Ndlovu, N. S. M. 2016. *Exploring the Planning Challenges of Service Delivery in Local Municipalities: The Case of the Midvaal Local Municipality*. University of the Witwatersrand, Johannesburg.
- Wotela, K. 2017: *Towards the outcomes-based approach to a 'research strategy, design, procedure, and methods' chapter for business and Public Administration research*. *Journal of Public Administration*: 52(1.1): 223 – 246.

Zuma, J. G. 2014. *Progress made, although challenges remain* [interview]. 18
February 2014.

ANNEXTURES

ANNEXTURE A: INTERVIEW GUIDE COMMUNITY MEMBERS (ENGLISH)

Interview Guide for Doctor Admin Student University of Limpopo

Dear Community Members / Formations

This research forms part of my Doctoral degree in Public Administration (PhD) at the University of Limpopo. The research interest is with ascertaining factors that influence Service Delivery Challenges in The Provision of Sustainable Sanitation and Clean Water within Capricorn District Municipality.

The Interview guide asks questions regarding the service delivery of water and sanitation in Capricorn District Municipality. Your participation as a person receiving services from the jurisdiction of the municipality will be highly appreciated.

Sincerely

Patrick (PAP) Mabothe

Participation consent

I hereby give my full consent to participate in this research on condition that I will remain anonymous, and my names will not be linked to the information that I will have provided to this research. I retain the privilege to withdraw should I feel uncomfortable with the involved research process

Signed

Date

2021-____ - ____

SECTION A: BIOGRAPHIC PROFILE OF RESPONDENTS

Please mark the applicable box with an X

1. Gender:

1	2
Male	Female

2. Age:

1	2	3	4
20-29 years	30-39 years	40-49 years	50 years and above

3. Marital
status:

1X	2	3	4
Married	Single	Divorced	Widow

4. Ethnic group:

1X	2	3	4	5
Black	Coloured	Indian	White	Other (Please specify).....

5. Highest
qualification:

1	2	3	4	5
National Diploma	Bachelor's Degree	Honours Degree	Master's Degree	Other (please specify).....

6. Employment status:

1	2	3	4
Government employee	Private employee	Self employed	Other (please specify)

SECTION B: ASPECTS OF WATER & SANITATION DELIVERY

7. Is the tap in yard / communal

Yard	Communal

8. How often do you receive water from those taps?

9. Are the ablution facilities based on water / to sewage or septic tank?

10. If based on septic tank, how often does the municipality empty them?

urban	rural
-------	-------

11. Do you live in the urban or rural area?

12. Do you pay for water and sanitation services?

13. Are there water meters in the yards?

14. **Rural:** is the latrine lined or not?

15. Does the municipality help with emptying the toilets when full?

16. How much do you pay for those services?

17. Is the water pumped using (Generator / Electricity) from the local area or is supplied through pipes from the bulk supply?

18. In your opinion, how do you think these services be improved?

Thank you for your participation

ANNEXTURE B

Interview Guide for the community / formations (Northern Sotho)

Hlogo: Dihlotlo tšeo Mmasepala wa selete o gahlanago le tšona ge o aba ditirelo tša kwgekgwe tša meetse le kelelatšhila: Mmasepaleng wa Selete wa Capricorn District, Limpopo Province.

- ❖ Gona le dithepe tša meetse moo le dulago naa?
 - Di ka mog ae goba ke tša Sechaba naa?
 - Meeste a dula a etšwa goba go direga eng?
 - Dintlwana tša botswa mare ke tša mohuta mang, a e kaba di nyaka meetse a go gogela ditšhila soretšeng ya Mmasepala goba tanka ya ka mog ae ya go epelwa (septic tank)?
 - **If based on septic tank**, a ekaba mmasepala o tla o goga mantle ka mo tangkeng ya botshwamare naa?

- ❖ ***NB: objective 2 will not be addressed by these group***

- ❖ Le dula lekeišeneng / sekgoweng goba magaeng naa?
 - Le lefa ditirelo tša Mmasepala tša meets le kelelatšhila naa?
 - Gona le dimithara tša meetse ka mo magaeng a lena naa?
 - **Rural**: dintlwana tša botswamare di ageleditšwe ka mo fase naa?
 - A ekaba mmasepala oa le thuša ka go goga matšhila ge botshwamare bo tletše (toilets)?
 - A ona le seo le sepatelago ge ba goga matšhila ao?
 - Meetse a lena a pompiwa ka mochene goba mohlagase (Generator / Electricity) go tšwa mo Motseng goba a tla ka diphaephe go tšwa matamong a magolo?

- ❖ Ka mantšu a lena, le bona ditirelo di ka dirwa byang gore go be le diphetogo tše di botse?

ANNEXTURE C

Interview Guide for the community / formations

Title: Service Delivery Challenges in The Provision of Sustainable Sanitation and Clean Water: The Case of Capricorn District Municipality, Limpopo Province, South Africa

- ❖ Are there water taps in the area you live?
 - Are they in the yards or communal?
 - How often do you receive water from those taps?
 - Are the ablution facilities based on water / to sewage or septic tank?
 - If based on septic tank, how often does the municipality empty them?

- ❖ ***NB: objective 2 will not be addressed by these group***

- ❖ Do you live in the urban or rural area?
 - Do you pay for water and sanitation services?
 - Are there water meters in the yards?
 - **Rural:** is the latrine lined or not?
 - Does the municipality help with emptying the toilets when full?
 - How much do you pay for those services?
 - Is the water pumped using (Generator / Electricity) from the local area or is supplied through pipes from the bulk supply?

- ❖ In your opinion, how do you think these services be improved?

ANNEXTURE D

Interview Guide for the officials

Title: Service Delivery Challenges in The Provision of Sustainable Sanitation and Clean Water: The Case of Capricorn District Municipality, Limpopo Province, South Africa

- ❖ Are all the local municipalities receiving portable water within the district?
 - Those that does are their Waste Water Treatment Plants effluent clean to recharge the water sources?
 - How is the staff compliment in those localities?
 - What qualifications are the staff members possessing at the WWTP or those dealing with water in the municipalities?
 - How is the state of sanitation in the municipality?

- ❖ How is the state of the management catchment agencies (CMA) in the provision of clean water within the district?
 - How is the maintenance of infrastructure currently given the increasing demand of water due to population growth?

- ❖ Are the municipalities paying for the water they receive from the CMA?
 - Are the communities paying for the services they receive?

- ❖ In your opinion, how can these services be improved?

ANNEXTURE E

P.O Box 55081

Polokwane

0700

04 April 2022

Enq: Patrick Mabotha

0152959281 x 203

0837671807

To:

The Municipal Manager

Capricorn District Municipality

41 Biccard Street

POLOKWANE

0699

Request to conduct Research within the District Municipality

The above matter refers:

1. May I be granted permission to conduct PhD research for this Topic: **SERVICE DELIVERY CHALLENGES IN THE PROVISION OF SUSTAINABLE SANITATION AND CLEAN WATER: THE CASE OF CAPRICORN DISTRICT MUNICIPALITY, LIMPOPO PROVINCE.**
2. Attached are the supporting documents for the application.
 - ✓ Proposal
 - ✓ Ethical Clearance from the University of Limpopo
 - ✓ Research Tools

Kind Regards



Patrick Mabotha

ANNEXTURE F

	<h1>CAPRICORN</h1> <h2>DISTRICT MUNICIPALITY</h2>
INTERNAL MEMO: CORPORATE SERVICES	
Date: 19 APRIL 2022	Memo Ref: 16/1/2/1/3

TO : ACTING MUNICIPAL MANAGER
FROM : EXECUTIVE MANAGER: CORPORATE SERVICES
DATE : 19 APRIL 2022
SUBJECT : REQUEST TO CONDUCT RESEARCH

PURPOSE

The purpose of this memorandum is to request approval for a student Patrick Mabotha from University of Limpopo who is currently undertaking a research project for PhD Degree to complete his studies.

BACKGROUND

Patrick Mabotha is studying Public Administration in the Faculty of Management and Law and as per the attached documents is in final year of Doctorate. The research will be for a prescribed period endorsed in the document. We therefore request that officials and politicians as indicated to give him all the support and hope that the findings will be shared with the organisation for better and effective service delivery.

RECOMMENDATIONS

- That the request for Mabotha Patric to conduct research to meet his Academic requirements be approved.


MADIMETJA PHAKA
ACTING OPS MANAGER: HRD

19/04/2022
Date



RECOMMENDATIONS

- That the request for Mabotha Patrick to conduct research to meet his Academic requirements be approved.

RECOMMENDED/NOT RECOMMENDED


BOLDWIN RAGANYA
ACTING MANAGER: HUMAN RESOURCE

19/04/2022
Date

RECOMMENDED/NOT RECOMMENDED

*Recommended on condition that the findings
to be obtained herein be utilized for study
purpose only.*


NAPE MORIFI
EXECUTIVE MANAGER: CORPORATE SERVICES

22/04/22
Date

APPROVED/NOT APPROVED

Approved


MOLATELO MASHEGO
ACTING MUNICIPAL MANAGER

25-04-2022
DATE



Corporate Services
FYA. Amm
05-04-2022

10 Acacia Ave

Flora Park

Polokwane

0699

04 April 2022

The Municipal Manager
Capricorn District Municipality
41 Biccard Street
POLOKWANE
0699




REQUEST FOR PERMISSION TO COLLECT DATA

The above matter refers:

1. I am Patrick Mabotha a student in the School of Management and Law at the University of Limpopo, currently undertaking a research project for my Doctor of Administration (PhD) degree. The research interest is with ascertaining factors that influence Service Delivery Challenges in The Provision of Sustainable Sanitation and Clean Water within Capricorn District Municipality.
2. I kindly request permission to collect data from the District Municipality amongst the community members, community formations, politicians and officials.
3. Further clarity / Queries / comments regarding the request arising may be kindly addressed my supervisor: Dr. K.R Chauke on this number: 082 5535946 or email: richard.chauke@ul.ac.za

Yours sincerely,



Patrick Mabotha

0837671807 / 0152959281

P17
employees needed

APPENDIX G



University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 3935, Fax: (015) 268 2306, Email: anastasia.ngobe@ul.ac.za

TURFLOOP RESEARCH ETHICS COMMITTEE
ETHICS CLEARANCE CERTIFICATE

MEETING: 29 March 2022
PROJECT NUMBER: TREC/47/2022: PG

PROJECT:

Title: Service Delivery Challenges in the Provision of Sustainable Sanitation and Clean Water: The Case of Capricorn District Municipality, Limpopo Province.
Researcher: PAP Mabotha
Supervisor: Dr. KR Chauke
Co-Supervisor/s: N/A
School: Economics and Management
Degree: Doctor of Administration in Public Administration

PROF P MASOKO
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

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

Note:



- i) This Ethics Clearance Certificate will be valid for one (1) year, as from the abovementioned date. Application for annual renewal (or annual review) need to be received by TREC one month before lapse of this period.
- ii) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee, together with the Application for Amendment form.
- iii) PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

ANNEXTURES H

07:45 VoLTE 4G 92%

← Search

Posts About Photos Mentions

 **Polokwane Municipality** 20h · 

PUBLIC NOTICE

Friday, 15 July 2022

UPDATE: OLIFANTS SUPPLY STOPPAGE

The latest information from Lepelle Northern Water is that "due to bad state of the leaking pipe we need to cut and replace it with another piece".

"The estimated time to completely scour and replace the 3meters of 800mm diameter pipe is 12hrs from now," the message further reads.

This means it will take more than 12 hours without water supply to Polokwane Municipality from Olifantspoort Plant.

Challenges on Lepelle Northern Water infrastructure and loadshedding on all water sources continue to impact negatively on supply to the residents and businesses within Polokwane Municipality.

As of this morning, the following areas are not receiving water: Ivydale, properties along Oost Street, Moregloed, Flora Park, upper parts of Serala View, and Bendor, Chuene, Maja, Thokgwaneng and Seshego.

Areas that experience low pressure in supply include: Nirvana, Hoog Street, Thabo Mbeki and Webster, lower parts of Fauna Park, Serala View, and Bendor.

Areas receiving supply are urged to use water sparingly.

III ○ <

ANNEXTURE I



You Write. We Edit. You Love it.

14 September 2022

TO WHOM IT MAY CONCERN

RE: CONFIRMATION OF LANGUAGE EDITING SERVICES: MABOTHA PHUTI ALFRED PATRICK

I confirm that I have done language editing for Mabotha Phuti Alfred Patrick's thesis titled:

**SERVICE DELIVERY CHALLENGES IN THE PROVISION OF SUSTAINABLE SANITATION AND CLEAN WATER:
THE CASE OF CAPRICORN DISTRICT MUNICIPALITY, LIMPOPO PROVINCE**

The thesis now conforms to the University of Limpopo's language editing standards.

Yours sincerely



Lynn

Lynn N. Sibanda

Tel: 011 050 0376

Mobile: 071 989 0983

Email: lynn@lovetoedit.co.za

Member of the [Professional Editors Guild](#)



Address: 16 Countesses Ave, Randburg, South Africa, 2194 | Telephone: +27 11 050 0376 | Email: info@lovetoedit.co.za
Website: www.lovetoedit.co.za | Registration Number: 2016/ 425723/ 07