Hindrances of Sustainable Water and Sanitation Provision Within Capricorn District Municipality in the Democratic Dispensation

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Abstract

South Africa is a water scarce country, the provision of water and sanitation is a basic need and a right that must be provided to the populace by the municipalities either subsidised by government through the Municipal Infrastructure Grant or through own municipal resources. Capricorn District Municipality is composed of Polokwane Local Municipality, Molemole local municipality, Lepelle Nkumpi Local Municipality and Blouberg Municipality. Amongst all these municipalities there is high rural domination and the inability to provide water daily in most jurisdictional areas. In ensuring that the research methodology applied and adopted by the study addresses the epistemological and ontological phenomenon the following were adopted, public choice theory, the rational model of reasoning and participatory research paradigm because the study is addressing societal issues affecting mostly marginalized groups. The study used a mixed method research methodology dominated by qualitative method. The quantitative method justified the availability of water and sanitation to the civilians of Capricorn District while the qualitative method was used to investigate the cause and effect of non-provision of sustainable water and sanitation. The study established that some hindrances found in the focus (Capricorn District Municipality) is because of illicit activities, poor infrastructural maintenance, and the need to establish an enabling environment by politicians to officials with no interference in the running of the administrative affairs.

Keywords: *Water; Sustainable; Corruption; Theft; Municipality and Capricorn District Municipality*

1. Background, Introduction and Problem Statement/// Introduction

The modern day, South Africa has become a water scarce country (Masindi and Dunker, 2016: 1). This scarcity of water has impact on provision of sanitation and water quality in both the rural and urban areas. In most of the rural areas water comes from rivers, natural fountains and limited municipal water taps (Furlong, 2012: 2741). In the urban areas supply of water is dominated by municipal supply but in the recent years there is a high observation of the mushrooming boreholes due to low supply and shortage of water. The water quality management becomes a problem when it comes to water acquired from the rivers, fountains and boreholes as the municipality is only responsible for piped water supply. The provision of water and sanitation is a basic need and a right that must be provided by the municipalities,

subsidised by the government through the Municipal Infrastructure Grant amongst others (Furlong, 2012: 2741; Sutherland, Hordijik, Lewis, Meyer & Buthelezi, 2014: 469).

There is a need to establish an enabling environment by politicians to officials with no interference in the running of the administrative affairs, 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 2019/2020 report further supported the sentiments by indicating that "clean books mean clean streets and stable leadership leads to better governance". This seem to be proofed by the situation which is experienced by 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 on those leaks, consequently the loss ballooned the water bill to the Bloem water to over Billion of rands. In some streets there are potholes which are caused by continuous running water and blocked sewage caused by infrastructure which is not coping because the pipes were not designed to service the current population (Patrick, 2021: 8). This is the situation found in Polokwane Municipality as highlighted by the study conducted by Mabotha, Netswera & Ganda (2019: 142).

The article will address the research question: How can the supply of water and sanitation to the citizens of the Capricorn District Municipality be improved to ensure efficiency and effectiveness? This article will outline the purpose of the study, Research methodology, theoretical framework, literature review, a summary of theoretical findings, conclusion, and recommendation.

2. Purpose of the Study

The purpose of this article is to highlight the causes and the reasons that makes Capricorn District Municipality to continuously experience inefficient sanitation and the insufficient clean water supply in the post-apartheid government in the urban and rural communities.

3. Research Design and Methodology

This paper used a mixed-methods research strategy for collecting, processing, and analysing empirical data. Qualitative strategy was used to collect empirical / primary data and quantitative strategy used a structured table formulated to determine the availability of water and sanitation to the inhabitants of CDM to determine quality levels of sanitation and water supplied in both the urban and rural areas.

The article adopted non-probability random sampling and purposive sampling because the respondents had a defining characteristic that makes them the holders of the data that is needed for the study. Bryman (2012: 187) regards this sampling frame as the list of all units in the target population. During data collection a snowball sampling / chain method was adopted as some respondents referred the researcher to other people with more information to answer the research question. Considering the lack of time and resources, the paper chose a willing fraction to participate in the study (Abdulai & Owusu-Ansah, 2014: 11).

The paper used a semi-structured or interview guides for qualitative research method in primary data collection with questions not asked chronologically as they appear on the paper but asked randomly based on what the respondents said from the previous question. That made the respondents to have a

logical flow of information dissemination and felt more comfortable when giving out the information known to address the phenomenon to a saturation point. Secondary data used to substantiate what has been said by the respondents and helped to justify the information discovered by the studies done in other areas was acquired from sources such as newspapers, journals, books, government documents and internet sources.

In analysing data, Qualitative data collected used thematic content analysis with Nvivo 12 software package as well as Microsoft Excel. The quantitative aspect analysed the duration of daily water and type of sanitation supplied to the civilians to gauge the required water needed to run waterborne systems effectively as well as the amount of effluent released to the environment.

Significantly, the study will be useful in both the (*locus and focus*) by changing the mindset of all the practitioners such as planners, engineers, policymakers and environmentalists to consider and encourage intergovernmental planning as it cuts across the various disciplines in practical terms and municipal service delivery implementation in general.

4. Theoretical Framework

4.1 Public Choice Theory

According to the study done by Boyne (1997: 57) in Mccarthy, (2020. 3), Public choice theory has its origin in two assumptions concerning local government: the first choice is the self – interest axiom which implies that if left to their own devices, policy makers will pursue their private interests rather than the public interests. The second choice is on politician's and officials' interests can be redirected towards the public interest if they are constrained by the pressure of competition. The theory views local government as an industry in which there are buyers and sellers in the market for local services. The buyers are households and businesses who choose to locate in specific areas and pay for their choices through local taxes and the sellers are the politicians and bureaucrats who either produce or directly provide services for the public.

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 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 the context of this paper, the theory indicates that a group of politically connected people who possess 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 on the state of local government that, "more municipalities than ever are dishing out tenders to companies in which their mayors, councillors, officials and families have stakes – and are not declaring them" (Mbanjwa, 2015; Whittles, 2017).

5. Literature Review

5.1 International Experience on Water and Sanitation

According to the study conducted by Yu, Wardrop, Bain, Lin, Zhang, and Wright (2016: 1) post the 2015 United Nations' Millennium Development Goals (MDGs) expiry date, the Sustainable

Development Goals (SDGs) were introduced. The focus is on the SDG 6 which is dedicated to water, sanitation, and hygiene (WASH) for the year 2030. This international study was done in 34 low income, 50 lower-middle income countries and the 34 countries which did not meet 2015 targets for drinking-water, and 61 countries where data was available as not having met 2015 targets for sanitation. The study excluded South Sudan because no census had been conducted since independence in 2011.

The results indicated that, water-related issues show improvement from unimproved drinking water and improved sources that are on or off premises with few capturing showing that the supply is characterised by interruptions and no solid collection time in some countries. On the other hand, it was found that some countries have populations that lack improved drinking water sources as they are increasingly concentrated in an ever-smaller amount of settings water. Sanitation results in 2017 pointed out that almost 10% of the world population practice open defecation (UNICEF & WHO, 2019), some use 'basic' sanitation with assess to sharing of facilities (Yu, Wardrop, Bain, Lin, Zhang, and Wright: 2016: 12).

Approximately, 2 billion people drink water that is feces contaminated. Furthermore, elimination or disposal of excreta from water and sanitation scores for individual countries fluctuate over time, likely reflecting changing national priorities (Yu, Wardrop, Bain, Lin, Zhang, and Wright: 2016: 12 & Howard, 2021: 3). Stoler, Weeks, Fink (2012) argued that the usage of bottled water changed the outcome and indicated the need for improved water sources.

Table 1 Source: Howard, 2021: 3

Indicator	% Global	Year	Source
Access to safely managed water	71%	2017	UNICEF & WHO (2019)
No access to basic water supply	11%	2017	UNICEF & WHO (2019)
No access to basic sanitation	26%	2017	UNICEF & WHO (2019)

6.Situation in Some South African Municipalities

15 million people were without safe water supply and over 20 million without adequate sanitation services. These numbers according to UNICEF translate into 1 in 3 people do not have access to safe drinking water (Masindi and Dunker, 2016: 1; UNICEF, 2019). The highest failure to deliver quality services in South Africa as highlighted by the Institute of Risk management South Africa (IRMSA) and the public service accountability monitor (PSAM) of the United Nations was that "poor service delivery is due to governance practices" and stable leadership more especially in the Local sphere of government (Hanyane & Naidoo, 2015: 241).

For instance, in Senqu local municipality, the mayor served a full five-year term, the Municipal Manager served for 20 years, and the Chief Financial officer sixteen years and they obtained a clean audit for the period 2019/20. Mangaung local Municipality got an unqualified report with serious supply chain management issues while under administration. The instability led to the municipality to be led by an acting Mayor, city manager is suspended with full pay and an acting manager is appointed to run the municipal affairs while the suspended manager is 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, situated in the Waterberg district in Limpopo province has a mayor who was ousted, came back and forcibly reimposed himself in 2014 with the assistance of armed police as well as bodyguards. The instability negatively

hampered basic operations in the municipality including the provision of water and sanitation. During the period 2011 and 2017 the municipality had six mayors and at least seven acting municipal managers (Phadi, Pearson & Lessafi, 2018: 5).

According to the Auditor General 's report the Municipality had an adverse audit opinion for the financial year 2019/2020 period despite having finance staff causing a R111m annual salary bill because of the instability of staff and the vacant chief financial officer position which was held by different officials on an acting capacity (Güles, 2021: 8). In South Africa, the problems of supplying consistent running water and 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; Mabotha, 2020: 246). This article investigated the hindrances of proper sanitation and the insufficient provision of clean water by the post-apartheid government in the Capricorn District Municipal areas.

7.Situation in Capricorn District Municipality

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, devalues their dignity and attracts unrest in the communities. Generally, water and sanitation service delivery in South African municipalities is a growing problem.

Most of the Wastewater Treatment Plants are in a serious state of decay, due to poor planning shown by high effluent volumes, poor operation and maintenance of wastewater, staff incompetency, as well as dilapidated sewage treatment infrastructure (lack of proper infrastructural investment). Failure to adhere to the effluent laws leads to the pollution of water resources upon which most rural communities' inhabitants rely 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.

The article aimed at examining the causes and effects of continuous inefficient sanitation and the insufficient clean water supply post-apartheid government in the urban and rural communities of the Capricorn District Municipality. Ultimately the following research questions were answered: And how can the supply of water and sanitation to the citizens of the Capricorn District Municipality be improved, to ensure efficiency and effectiveness?

8.Findings

8.1 Water Tap Location

Table 2, Source: Own work

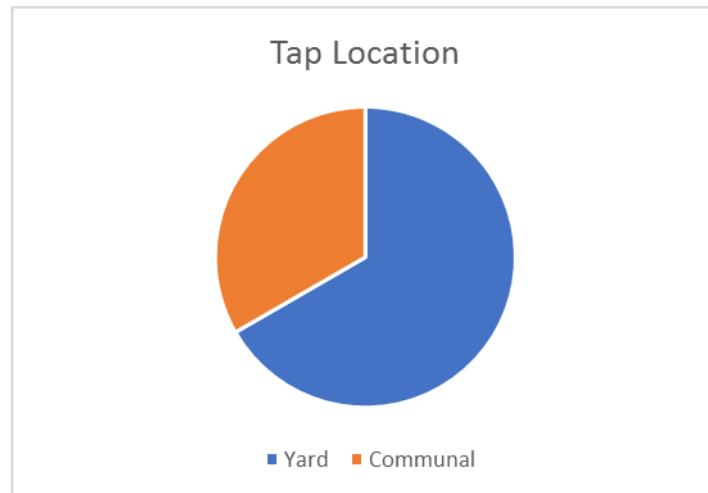| Tap Location	Percentage
Yard	52
Communal	26

Figure 1: Tap Location. Source: Own work

The study established that there are people who do not have taps in their yards or 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. 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.

8.2 Frequency of Receiving Water

Table 3. Source: Own work

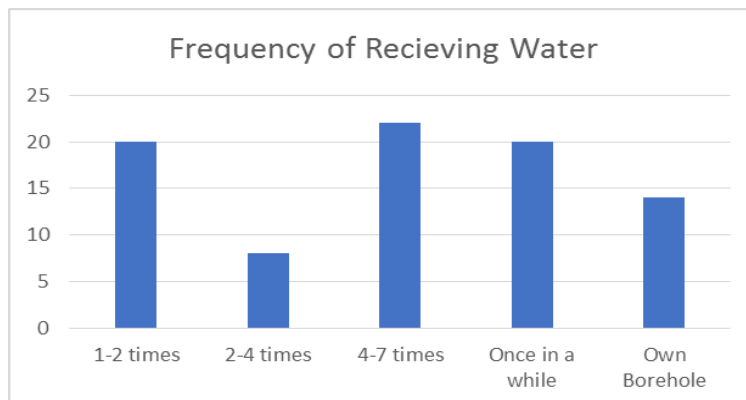| Frequency of receiving water weekly	Count
1-2 times	20
2-4 times	8
4-7 times	22
Once in a while	20
Own Borehole	14

Figure 2: frequency of receiving water. Source: Own work

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

8.3 Ablution facility type

Table 3. Source: Own work

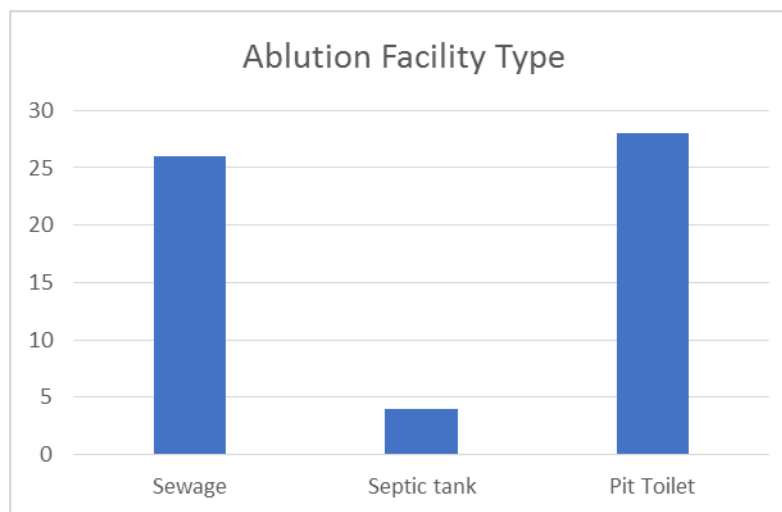| Ablution Facility type	count
Sewage	26
Septic tank	4
Pit Toilet	28

Figure 3: Ablution facility type. Source: Own work

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

9. Themes Developed and analysed

Name	Respondents
Consultation	Need to teach people importance of paying for services.
Corruption	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*".
Cost Recovery	Intensive consultation to avoid culture of non-payment.

Name	Respondents
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	*'Theft is rife because people see an opportunity to fill their stomach not looking at the long-term replication to the municipality'*
White Collar Theft	Ineffective boreholes drilled to mostly exhort money from the struggling municipalities and commodify water supply through water trucks.
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
Sanitation	Not lined toilets in most areas, septic tanks not drained and wastewater treatment plants in bad conditions

Source: Own work

10. Summary of findings

The article has discovered that there are various elements that contribute to the provision and delivery of clean water as well as sustainable sanitation to the citizens of Capricorn District Municipality. 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 requires people to be hired within the jurisdictional area of implementation. 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 done to syphoned resources to benefit individuals, projects that do not yield water when completed and must be redone. In most areas pipes which are laid, and taps provided do not yield water because the planning did not identify the source at the beginning of the project. This was also said by President Cyril Ramaphosa when indicating that "those who have stolen funds from the Giyani Bulk Water Project will be held accountable" (Phaladi, 2022).

In some areas 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 high areas do not get water. Theft of transformers that power the water pumps in the rural areas and turn provision of water through trucks as a permanent solution not a temporary one.

The problem with sanitation is due to 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.

Conclusion

The empirical data presented in this chapter give a response on the phenomena. Data presented was 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 literature review and concepts derived from the themes that developed the research 's conceptual framework.

In attempting to rescue the failure of local government a *district model* which cannot flourish under corruption has been introduced and need to be achieved through the help of '*comprehensive social compact'* that needs social partners 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 common objective should be to have the country as a winner 'not individual social partners' (Madubela, 2021).

The study by Bovaird and Loeffler (2009: 398) in Maqoko and Asmah – 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 public servants, as well as the municipal administrative officials, must be impartial in implementing government policies, programmes, 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 delt with so that proper governance and trust amongst residents can be regained.

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