Factors Inhibiting Sustainable Provision of Water and Sanitation Services in Capricorn District Municipality

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Abstract: Since the inception of the democratic government in 1994, South Africa has enacted policies, which are no longer segregating people in terms of their colour, creed and culture. The newly enacted policies call for clean administration which is not characterised by corrupt activities, maladministration and unskilled personnel. These requirements are not fully adhered to because in most Municipalities, policies are met with practice inconsistencies. Corruption, unskilled staffing and short-lived solutions that hinder government's focus to align with the Sustainable Development Goal's initiatives, delay in achieving the National Development Plan and Medium-Term Strategic Frameworks. The aftermath of maladministration and corruption are seen through increasing unemployment, inequality and poverty even at the local government sphere. Given the democratic dispensation, which has taken place for 26 years, the government is still failing to provide clean water and decent sanitation to all South African citizens. This happens despite several policy directives issued by government such as the White Paper on Water and Sanitation. Lack of training and staff development when transferring water and sanitation functions to municipalities by the former Apartheid National government contributed negatively to water and sanitation delivery. End users of water and sanitation services experience frustration due to lack of technical and administrative capacity. Consequently, these, led to prolonged service delivery crisis. The paper is derived from the review of literature and the conceptual analysis of documents, books, journals and government reviews. Consequently, the paper 's findings revealed that at the operational level there are gaps that need to be filled on unskilled staff as that contributes to corruption / maladministration and short-lived solutions instead of long-term/permanent solutions to problems of water and sanitation.

Keywords: Effluent, Sanitation, Water care, Water born infections

1. Introduction

In a democratic state, government is supposed to be an agent of citizens, instil hope in people's lives through improved services such as water and sanitation. It is very unfortunate, that in most African countries which achieved democracy, people still struggle to get services from what is supposed to be done by welfare state. For instance, the study conducted by The World Health Organisation (2019) in Ritchi and Roser (2020), 2.2 billion people in the world do not have safely managed drinking water, while 4.2 billion are without safe sanitation.

In the European countries, a significant progress was done in achieving the United Nations Sustainable Development Goal (SDG) No. 6, "ensuring availability and sustainable management of water and sanitation for all" (WHO, 2019). A contrary view is experienced by the African countries as there is little progress in achieving the similar goals, on average more than 52% of Africans have to leave their compounds to access water, and only one-fourth have access to sewage infrastructure (Howard & Han, 2020:1).

Furthermore, in Europe, 92% which constitute roughly 900 million people have access to properly and safely managed drinking water services free from contamination in their homes at all times in 2017. 16 million people still lack access to basic water services and 3 million rely on surface water for direct consumption. Almost 68% had safely managed sanitation services and 73% sanitation services are connected to sewage (WHO, 2019).

In South Africa, the impediment of achieving effective service delivery is open corruption which makes people display displeasure and loose hope in formal institutions of combating the practice and resort to citizen 'noise-based' driven approach to highlight their plight more especially at the local sphere of government (Basheka & Mubangizi, 2012:636-637). This anomaly is practiced in most African Countries where citizens have to pay a bribe in order to get services (Howard & Han, 2020:1). In line with the South African context, Uganda saw a protest known as 'Walk-to-work' in April 2011 (Reuters, 2011). In that country Corruption – which was committed at the ministerial level had 'major culprits only getting

a slap on the wrist', this created public anger in the cities (Basheka & Mubangizi, 2012:637).

The study adopted the Political ecology theory (PE) as it is concerned with the manner in which humans relate to the biophysical world and the many environmental challenges that vulnerable communities across the world are confronted with. Amongst others are the impacts on the health conditions, causes of environmental degradation as well as control over the natural resources, food poisoning, air, water, the environmental crimes of corporations, land grabbing and urban environmental injustices. Thus, political ecologists believe that the human struggle for resources and healthy environments is strongly influenced by how much power societies, and individuals hold, and how they use it (Batterbury, 2018:439). The focus of this paper is on factors inhibiting sustainable provision of water and sanitation services in Capricorn District Municipality which encompasses sub-district minicipalities: Polokwane Municipality, Blouberg Municipality, Molemole Municipality and Lepelle-Nkumpi Municipality.

2. Background and State of Affairs in Capricorn District Municipality

Capricorn District Municipality (CDM) is a category C Municipality, and it is also considered as a Water Service Authority (WSA). In its jurisdictional area, Polokwane Municipality also possess the rights of WSA (CDM, 2018/19:49). Molemole, Blouberg and Lepelle-Nkumpi are regarded as water service providers (WSP). The responsibility to provide clean water rests with the district municipality which should comply with section 27 of the RSA constitution, 1996 and Section 2(a) of the water Services Act, Act 108 of 1997. The Act provides that, access to safe drinking water and the right to basic sanitation not harmful to the environment, human health and well-being is a basic human right.

According to Census of 2011 and community survey 2007 and 2016 conducted by Statistics South Africa (STATSSA), houses with access to piped tap water were at 76%. The disestablishment of Aganang Municipality in 2016 affected the local municipalities because most of the villages which did not have services affected the municipalities in which they were re-demarcated to. For instance, Blouberg moved from 82.7% in 2011 to 62,4% in 2016; Molemole moved from 87,4% to 64,9%; Polokwane from 96,1% to 82,8% and Lepelle–Nkumpi which experienced

new extensions of villages moved from 75,7% to 62,3%. This implies that approximately 24% of houses does not have access to piped tap water and depend on unidentified sources such as boreholes (CDM, 2018/19:50).

The community survey from STATS SA (2016) shows that approximately 2,4% of households depends on water from unknown sources while 27,7% depends on boreholes and 70% receives water from the regional and local water schemes from storages of The Glen Alpine Dam in Mogalakwena river constructed mainly for irrigation purposes, Rhenosterkop dam and Flag Boshielo dam. The main challenge is in Lepelle Nkumpi municipality which depends on Olifantspoort Waste water works (WTW) and boreholes which are not supplying sufficient water to the residences because demand exceed the supply. Molemole and Blouberg depend on boreholes which yield low supplies with households serviced by communal stand pipes with the furthest house at 200m. The Municipality employs repairs term contractors for speedy maintenance and breakdowns (CDM, 2018/19:50).

The district municipality has provided water tankers to temporarily interdict the water shortage supply and solicit relief in areas experiencing water shortage. An action which was seen executed as a support measure by the Department of Water and Sanitation in November, 2019 at Amathole District Municipality. (SA News Agency, 2018; Ngcukana, 2019:8). Section 152 of the South African constitution, made provision that South Africa should uphold a democratic, accountable government to all citizens, provide services to the communities in a sustainable manner, promote a safe and healthy environment with the intention of encouraging people to be part of matters affecting them at local government level (RSA, 1996; Beyers, 2015:121). For sustainable service delivery, citizen participation and proper consultation is of utmost importance in the local spheres so that decisions taken be informed by the inputs from the people affected. These, sentiments were supported by Netswera and Kgalane (2014:263) indicating that Communities should participate in the development of Integrated Development Plans (IDP) and take part in service prioritisation.

3. Ladder of Citizen Participation

Citizen participation is segmented into three variants whose intention is to determine the relationship

between the inputs made and the decision taken. According to Arnstein (1969:3) explained by Basheka & Mubangizi (2012:641), the first segment is *non-participation*, which entails that government take decisions without engaging their citizens. The second being *tokenism*, which implies that consultation is done for formalities and compliance as the people's inputs are not considered in decision making and citizen empowerment, which implies that people fully take part in government activities while knowing their rights and government obligations towards them. In the context of our paper scholars such as (Netswera, 2005; Netswera & Phago, 2009) in Netswera and Kgalane (2014:263) questioned the effectiveness of the IDP processes in the municipalities.

The questioning of this IDP participation is mostly brought by non-delivery of quality services and hiring of staff in some cases in positions which they do not qualify. These, according to the ladder of citizen participation brings to the fore 'tokenism' which implies that consultation is done for formalities and inputs are not seriously taken into consideration when taking decisions. This element of corrupt activity leads to municipal unrests which are taking place in most municipalities. This is supported by Koma (2010:116) highlighting that "effective and sustainable provision of basic services, administrative capacity and institutional performance to drive service delivery and effective implementation of government policies and programmes is a critical challenge for the local sphere". Furthermore, Netswera and Phago (2011:132) share the same point of view by indicating that the local spheres are confronted with challenges of implementing the strategic plans as adopted in the integrated development planning.

According to Tsheola, Ramonyai & Segage (2014:392-395), citizen empowerment can be equated to a democratic state which implies that the exercise of state power relies on popular consultation and participation of its sustenance. Consequently, the state becomes a servant of the populace. Given the level of poverty in most municipalities and lack of proper service delivery planning there is a need to ensure realistic participation in the planning processes on matters that affect basic services such as water, health care, electricity, sanitation, transport and education. In this case public participation is of critical importance to planning for appropriate quality services for the provision of services that conform with quality, quantity and standard of the

solutions given. These raise eyebrows on the quality of municipal office bearers and quality control.

4. Sanitation Provision

The STATSSA community survey (2016) indicated that Capricorn District Municipality had 33% of households with access to sanitation facilities, 66% had no access. This is an improvement from the 2011 statistics which shows that 65% of people were using pit latrines both Ventilated improved pit (VIP) and without ventilation, 26.6% had access to flush toilets while 4,2 had no sanitation facility in their yards. The most dominating method of sanitation is pit latrines in the rural areas. In 2016, Blouberg was 8,5%, Molemole 17,8%, Polokwane 48,2%, Lepelle-Nkumpi 21,2% and Capricorn District 33,2% (CDM, 2018/19:51). Councillor, John Mpe (2019:1) indicated in his state of the district address that there is improvement in water supply as it was 76% in 2014 and in 2019 it is standing at 89% with Sanitation being at 65%. Lebowakgomo Waste Water Treatment Plant (WWTP) has undergone refurbishment during the period 2017/18 and it now needs to be upgraded. On the other hand, the district municipality has appointed consultants to evaluate and assess all WWTP so that they give proper advice on methods and mechanisms of appropriate waste water treatment, upgrading requirements that will cater for the current and future demands more especially, on the out falling sewage for Lebowakgomo as well as Senwabarwana for connecting the surrounding villages (CDM, 2018/19:51).

5. Participatory Democracy

In participatory democracy local government is that part of government where communities play a pivotal role as electorates, end-users and consumers of services provided by their municipal councils which they have to hold accountable for whatever action they take. In many municipalities in modern days, people are resorting to unrests with the aim and intention of getting sufficient water and sanitation services. Assessment made by the Department of Cooperative Governance and Traditional affairs (CoGTA) found that much is attributed to 'poor government and accountability, weak financial management, incapacity of municipalities to deliver on basic services and unqualified personnel in managerial positions and interference of politicians in the administrative affairs' (Beyers, 2015:121). In participatory democracy factors that will help sustain the relationship

and attain common goals between the people and leaders is trust, honesty and access to information. Unfortunately, in most instances people with information on municipal governance are barred from the discussion forums as requested by the legislation, by those who are supposed to be in the forefront and encourage them to participate. Instead, they prefer to have forums with those people who are less informed on local matters. Either the gatherings are held while most of the people are at their work places or invite people who are supporting the politicians in power, mainly members of their political party. This has an impact on inputs for planning and policy making (Mubangizi & Basheka, 2012:640).

Dragomir (2018:20) termed it responsibility and authorisation, where in all people should have an equal opportunity to participate and influence the decisions affecting their lives; create an atmosphere of respect, tolerance for different points of view, values and traditions and non-compromising the sustainable development of other communities.

6. Public Perception on Service Delivery

Most people view appointment of service providers for operation and maintenance of water and sanitation as a means of politicians and officials to enriching themselves. The reason being that more taps does not mean clean daily running water, which is treated and makes people not to look for alternative sources of water, which does not contain waterborne ailments. This is a matter of concern as most people in South Africa depend on unimproved water sources such as streams, rivers and unprotected springs (Edokpayi, Rogawski, Kahler, Hill, Reynolds, Nyathi, Smith, Odiyo, Samie, Bessong & Dillingham, 2018:2). This was supported by Minister of CoGTA Dr Zweli Mkhize indicating that "The municipalities faced a number of perennial political, service delivery, financial management and governance challenges". Building functional municipalities include ensuring clean governance with fraud and corruption being addressed with the assistance of law enforcement agencies. For example, the Hawks are investigating municipalities, through the Clean Audit project (CoGTA, 2018).

7. War Room on Service Delivery

War room on service delivery, is a Province-wide integrated approach developed to enhance service

delivery, improve responsiveness to communities and find ways of reducing protests related to service delivery amongst the Provincial Government, Municipalities, Councillors and the communities (SA News, 2014). Further intentions of this programme were highlighted by Gauteng Premier David Makhura and the Minister of Cooperative Governance and Traditional Affairs as, ways and means to review, improve, enrich and expand people's democracy. The review has to focus on causes which made people lose confidence in the current structures and processes of public participation and what needs to be done to build popular democracy and people's power in action, develop ways and means to re-energize communities to actively participate in community development in a constructive and proactive way. On the other site of the continuum support councillors so that pressure can be relieved from them when there are service delivery challenges (Marketing & media news South Africa, 2014; PMG, 2017).

Furthermore, Minister of CoGTA, Dr Zweli Mkhize indicated that Government has identified 87 dysfunctional municipalities that required urgent support to deal with governance, financial management and service delivery related matters. The National Treasury further highlighted that 166 municipalities are facing serious financial challenges and that 122 have unfunded budgets. To quarantine this anomaly government has launched the Municipal Recovery Programme (MRP), which is informed by the principles of CoGTA's Back to Basics programme in order to assist struggling municipalities achieve a turnaround (CoGTA, 2018).

8. Back to Basics Programme

This is a programme by the Department of Cooperative Governance and Traditional Affairs (CoGTA) which intended to provide local government sustainability directives and achieve proper service delivery by avoiding lack of capacity in municipalities, enhance performance of maintenance and provision of services out of the 257 municipalities as most are characterised by poor or dysfunctional financial systems. The programme also supports those municipalities which are doing well in the control and spending of allocated grants (South Africa, 2014:7-8). In the state of the District address Cllr Mpe (2019) indicated that the District spend all the grands as allocated more specifically Municipal Infrastructure Grants (MIG). Factors which inhibit

progress was found to be amongst others "corruption, poor engagement with communities" and bad governance which is described as maladministration wherein the public office is used to enrich oneself, solicit personal benefits in an improper manner by exercising power in the management of the economic and social resources in a *malafide* (bad faith) manner, instead of discharging responsibility in an effective, transparent and accountable way (Sebola, 2014:996). The concern people have regarding the District municipality's spending of grants is dry taps and boreholes which does not give water continuously.

Other inhibiting factors were found to be poor financial management and negative audit outcomes (MFMA, 2017-18:18). This is seen by lack of accountability and capacity to provide the services expected to be provided to the constituencies. Part of solving improper accountability by the National treasury which stops allocating funds or partially reduce the allocation due to non-compliant or deviations from section 3 of DORA (2016) stating that 'in case of underspending or overspending of funds as allocated, national treasury might stop or partially reduce the funds' (Oosthuizen & Thornhill, 2017:440).

The programme requires that sound financial management practices be adhered to, accompanied by transparency and implementation of approved budgets by management as per the Integrated Development Financial Plan of 3-5 years, budget performance targets and indicators showing project and programmes to be effectively implemented for realistic service delivery given the available resources (Slabbert, 2016:5). Back to basics programme further intends to resolve and ensure that 60% of the municipalities in financial distress is resolved, the intention is to ensure proper provision of services and reduce service-related strikes. The problem is brought by addressing short term needs such as emergency repairs and avoiding major problem-solving projects for long term such as maintaining infrastructure (SA Republic, 2014:36). For instance, in Capricorn District Municipality, tanks were provided in those areas with low yield of boreholes and some areas of Lepelle-Nkumpi which the demand for water was higher than the supply from reservoirs (Mpe, 2019:1).

If the programme can be implemented officials and politicians who connive for illicit activities and

corrupt practices will not have any protection when not accounting transparently to the constituencies due to political interference and wrongful instructions, protection is given to those who tour the line of a given faction which is ruling the administration of the day (Olver, 2018:9).

9. Financial Sustainability in Local Government

Post 1994 democratic elections South Africa introduced 'wall to wall' municipalities and merged the defragmented racially formulated local government administrations to become non-racial (The Craft, 2016). This process led to most municipalities having to rely on grants from national government in order to capacitate them meet the developmental goals of government such as provision of basic services such as water, sanitation, electricity, housing and refuse removal. The grants will further assist in addressing the infrastructure backlog as functions allocated by Section 227 RSA constitution (1996) in municipalities with no capacity of collecting enough or sufficient revenue for meeting the service delivery obligations (MFMA, 2017-18:434).

Care needs to be taken in ensuring that municipalities in future are self-sustainable because grants might make them dependable on national government and not create own revenue sources for effective maintenance of infrastructure. This implies that there is a need to have properly trained staff with capacity and skills for obtaining funds legally through proper billing systems, utilise grants in a sustainable, effective and efficient manner. The intention is to ensure that future generations meet their own needs while the current generation obtain their development (Oosthuizen & Thornhill, 2017:434). Madonsela's (2013:7) view on sustainability is to have a seamless, uninterrupted, ever improving provision of quality services to the people who eventually become free to meet own needs and reduce their dependency on government.

If there can be a possibility that the political interference be reduced or achieved municipalities will utilise grants for what they are allocated for in accordance with the grant framework (Salga, 2011:1). Utilising funds accordingly will help municipalities get more grants as the formula depends on what was spent the previous year (SA Republic, 2015:3). Failure to submit reports lead to non or less allocation as they are based on the proportion

of each municipal backlog and poor households in each jurisdictional area (Oosthuizen & Thornhill, 2017:439; SA Republic, 2015:42-44).

10. Results and Discussion

10.1 Maintenance and Ageing Infrastructure

The district is dominated by water scarcity and experience low rainfalls with over 80% population depending on ground water sources which are not treated. Existing boreholes sometimes run dry while those that use electric pumps experience theft and damage of Eskom transformers. This was supported by the District Mayor Mpe (2019:3) in the state of the district address saying that "we are still besieged with challenges such as bulk water supply, inadequate sanitation and other basic services". This leads to shortage of water to the civilians. The shortage of water is well demonstrated by water reduction from the Olifantspoort and Flag Boshielo Dam with adverse impact on the communities around the Lepelle-Nkumpi Municipality as it is the supplier of raw water. CDM is appealing to the members of the communities around the Lepelle-Nkumpi Municipality to start using water sparingly and economically (Masondo, 2016).

Rural-Urban migration and the rapid population growth in South Africa pose greater water demand and increase contamination of available water resources and contribute to ageing infrastructure. This is due to overload on the water reticulation network and WWTP high intake which contaminate the environment due to spillages and not well treated effluent (Mothetha, 2016:12). In the district, Seshego WWTP is designed to take 7.4ml per day but it is receiving roughly 10ml per day, Polokwane is constructed to take 28ml per day, but it is receiving roughly 34ml per day. Mangkweng's intake is 8ml and is still within the capacity as it is receiving 6ml per day. This high intake implies that the plants require high maintenance to comply with required effluent (Erasmus, 2018).

In Lepelle-Nkumpi (Lebowakgomo WWTP) according to the risk-based assessment conducted by DWA (2009) it was found that there is high risk of the design capacity from the inflow exceeding the design capacity. The final effluent discharged to environment down was found posing a serious risk to the streams utilised by the surrounding communities and pollutes the groundwater (Mosotho, 2016:6).

Seshego Waste Water treatment works was also identified by the Parliamentary committee conducting an oversight visit to be worse because some of the water infrastructure was not operational. Some of the challenges discovered is "lack of budget for maintenance work". Chairperson of the Portfolio committee R Semenya, indicated that "without enough maintenance budget, it will be impossible to run the system properly". Semenya further indicated that "she is worried by the contaminated water that flows back to Bloodriver", which is from the Wastewater treatment plant in Seshego. She further suggested that the law must be amended to permit the Minister of Water and Sanitation to be the water licence holder (Machaka & Leshiba, 2019).

10.2 Appointment of Contractors

Team of contractors is appointed to reduce the turnaround time on leaks and repairs while the Municipality is only able to collect 13% of billed water and 10% from services charged as a result of poor implementation of credit control policies (CDM, 2018/19:259). The concern which the communities have is what are the Municipality's technical staff in water and sanitation doing as most of the services are done by consultants or contractors. This was also raised by the chairperson of the Parliamentary Portfolio Committee at Seshego WWTP indicating that there is "lack of skilled workers to run the plant" (Machaka & Leshiba, 2019). Furthermore, the 100% spending of Municipal Infrastructure Grants and WSIG doesn't make operation and maintenance be up to date at all times as the procurement processes takes long before appointments are done. The problem with WWTP spillages has adverse impact on the people downstream because they get water which is contaminated and prone to cause water borne diseases (Mothtetha, 2016:2). According to Mema (ud: 8) the problem of spillage and ageing infrastructure's remedial action relies on the responsible authorities. If the authorities respond promptly, impact on groundwater will be managed because that will improve the operations, maintenance, planning and enforcement of environmental laws.

10.3 Financing v/s Revenue

The municipality is losing revenue due to illegal connections of water to the houses and most leakages due to old infrastructure that takes time to be attended. Some residences and businesses chose to drill own boreholes instead of paying their debts at

the Municipality. Mpe (2019:3) stated that in trying to salvage this problem the District municipality is planning to strengthen the cost recovery strategy for revenue enhancement; enforce water By-laws; respond rapidly to leaks and disconnect illegal connections; introduce and install water meters in most of the households; implement water conservation and demand management strategy. Lastly, the Municipality intends to reduce dependence on grants, roll out credible billing system and improve budget growth. Most of the capital projects are funded by grants and in keeping good governance principles the District municipality adheres to openness, transparency, accountability, efficiency, competency and capacity to manage wasteful or fruitless expenditure and that no money was returned to National Treasury as a result of under-spending the Municipal Infrastructure Grant.

10.4 Temporary Solutions

In an attempt to solve water and sanitation problems the District Municipality sends out water tanks in those areas where shortage of water is experienced both rural areas and towns. In the rural areas lack of access to decent sanitation facilities can translate into poor hygiene, and no improvement on human dignity. In towns and cities more houses are built and connected to the WWTP which were never expanded since 1994. As a result, there are spillages that contaminate water sources which the effluent runs into. For instance, in 2018/19 the baseline status indicated there were 20 spillages reported per month due to the WWTP which operates above capacity. The remedy provided was to refurbish the WWTP but that did not solve water problems. In Lebowakgomo, contractors were appointed to do an analysis and recommend what needs to be done next after refurbishing the WWTP (CDM, 2018/19:260).

11. Conclusion and Recommendations

Analysing different secondary sources, service delivery challenges confronting South African municipalities need to improve public participation which is usually carried out through structures such as ward committees, ward councillors and mass meetings. If municipalities were to commit themselves to participatory governance, municipal planning and programmes would be informed by local needs. Instead, communities feel alienated and disconnected from decision-making processes and

are thus disempowered. It is believed that citizen engagement increases municipality's legitimacy.

Furthermore, the municipalities should establish, strengthen and capacitate ward committees on communication and management as they are part of the municipal running together with the ward councillor. The capacitation will help maximise community interaction which is not biased to any ruling elite and improve participation in service delivery projects. During the state of the District address Councillor, Mpe (2019:14) indicated that the District Municipality plan to live up to its vision "Home of Excellence" and serve its people with diligence, its workforce and (Councillors) leadership are sufficiently capacitated. For instance, some are offered bursaries and scholarships that enable them to enrol in a variety of courses that are relevant to their work or deployment respectively. The conferences, training sessions and capacity building programmes attended are accredited and can therefore be used beyond council term.

It is common knowledge that South African municipalities are characterised by conflict between politicians and senior administrative office bearers. There is often confusion regarding the duties and functions of the office of the Mayor and the office of the Municipal Manager. Another challenge is the municipal officials who cannot divorce party politics from municipal administration. This study found that some politicians confuse interference with intervention. This results in some politicians involving themselves in administrative issues. Like most municipalities in South Africa, sustainable service delivery is delayed in Capricorn District, because short term solutions are adhered to for a long period such as water tankers for areas with low yield on boreholes, appointment of term contracts for repairs and maintenance who extract more money from the municipality instead of utilising internal technical staff which were hired under the pretext that they qualifying for the positions.

References

Basheka, B.C. & Mubangizi, B.C. 2012. Citizen-driven approaches in fighting corruption: a comparative analysis of Uganda's and South Africa's local government system. *Journal of Public Administration*. 47(3):636-655.

Batterbury, S.P.J. 2018. Political ecology. In Castree, N., Hulme, M. and Proctor, J. (eds.). The Companion to Environmental Studies. London: Routledge. p.439-442.

- Beyers, L.J.E. 2015. 'Service Delivery Challenges within Municipalities in the Capricorn District of Limpopo Province', *Journal of Human Ecology*, 50(2):121-127. doi: 10.1080/09709274.2015.11906866.
- CoGTA, 2018. End of Year Statement by Minister Zweli Mkhize on Progress Made by CoGTA in Implementing Programme of Action. 13 December. Pretoria: Government printers.
- Dragomir, C. 2018. The role of Public Management in communities' sistainable development. Review of General Management, 28(2):1-22.
- Edokpayi, J.N., Rogawski, E.T., Kahler, D.M., Hill, C.L., Reynolds, C., Nyathi, E. & Smith, J.A. 2018. Challenges to Sustainable Safe Drinking Water: A Case Study of Water Quality and Use across Seasons in Rural Communities in Limpopo Province, South Africa. *Water*, 10(159):1-18; doi:10.3390/w10020159 Available at: www.mdpi.com/journal/water.
- Erasmus, L. 2018. Waste plant a 'priority project', says Polokwane Municipality. Review, 25 August. Available at: https://review online.co.za/273466/significant-progress-at-waste-plant/. Accessed 25 February 2020.
- Howard, B. & Han, K. 2020. African governments failing in provision of water and sanitation, majority of citizens say. Afrobarometer Dispatch. 349. p1-24.
- Machaka, T. & Leshiba, N. 2019. Urgent intervention sought at Seshego Wastewater Treatment Works. Capricorn F.M. Available at: https://www.capricornfm.co.za/urgent-inter vention-sought-at-seshego-wastewater-treatment-works/. Accessed 25 March 2020.
- Marketing & Media News South Africa. 2014. War Room to help service delivery in Gauteng. 2 September. Available at: https://www.bizcommunity.com/Article/196/524/118305. html. Accessed 20 March 2020.
- Masondo, J. 2016. Shortages of water and enforcement of water restrictions. Capricorn District Municipality. Available at: https://www.cdm.org.za/news/368-shortages-of-water-and-enforcement-of-water-restrictions. Accessed 21 March 2020.
- Mbele, N. 2010. Turnaround strategy: implications for municipalities. Johannesburg. Regenesis.
- Mema, V. ud. Impact of poorly maintained wastewater and sewage treatment plants: lessons from South Africa. Council for Scientific and Industrial Research (CSIR). Pretoria.
- MFMA. 2017-18. Consolidated general report on Local Government audit outcomes. Auditor Greneral. Pretoria: Government printers.
- Mosotho, L.S. 2016. Intergrating disaster risk assessment into the upgrade of Waste Water Treatment Works (WWTW) in Lepelle-Nkumpi Local Municipality, Limpopo Province. Unpublished Masters Dissertation. university of Free State: Bloemfontein.
- Mothetha, M.L. 2016. Evaluation of the impacts of Municipal Waste Water treatment on the receiving environment: A case study of the Olifantsvlei Waste water treatment plant in the Gauteng province, South Africa. University.

- Mpe, M.J. 2019. State of the District adress by the executive Mayor of Capricorn District Municipality, his worship, Councillor John Mpe, Seakamela traditional authority, Blouberg Municipality. Capricorn District Municipality.
- Namiti, M. 2011. Uganda walk-to-work protests kick up dust. Al Jaazera. Available at: https://www.aljazeera.com/indepth/features/2011/04/201142831330647345.html. Accessed 20 March 2020.
- Netswera, F.G. & Kgalane, S. 2014. The underlying factors behind municipal violent service delivery protest in South Africa. *Journal of Public Administration*. 49(1):261-273.
- Odiyo, J.O., Samie, A., Bessong, P. & Dillingham, R. 2018. Challenges to Sustainable Safe Drinking Water: A Case Study of Water Quality and Use across Seasons in Rural Communities in Limpopo Province, South Africa. *Water*, 10(159):1-18.
- PMG (Parliamentary Monitoring Group). 2017. Question NW90 to the Minister of Cooperative Governance and Traditional Affairs. 02 May. Available at: https://pmg.org.za/committee-question/5292/. Accessed 21 March 2020.
- Reuters. 2011. Fact box: Uganda's 'walk to work' protests. World News. 27 April. Available at: https://www.reuters.com/article/us-uganda-protests-fb/factbox-ugandas-walk-to-work-protests-idUSTRE73Q5BG20110427. Accessed 20 March 2020.
- Ritchie, H. & Roser, M. 2020. Sanitation. Published on line at OurworldIndata.org. Available at: http://ourworldIndata.org/sanitation" [online Resources].
- SA News Government Agency. 2014. Service Delivery War Room for Gauteng. 01 September. Available at: https://www.sanews.gov.za/south-africa/service-delivery-war-room-gauteng. Accessed 20 March 2020.
- South Africa, Republic. 2015. National Treasury. Website annexure to the 2015 budget review. Explanatory memorandum to the division of revenue. Available at: https://www.treasury.gov.za. Accessed 10 March 2020.
- South Africa, Republic. 2014. National treasury. Review of local government infrastructure grants. Recommendations for reform. Available at: https://www.ffc.co.za. Accessed 10 February 2020.
- The Craft. 2016. Local Government in South Africa. The Journalist. 12 July. Available at: https://www.thejournalist.org.za/the-craft/local-government-in-south-africa. Accessed 21 March 2020.
- Tsheola, J.P., Ramonyai, N.P. & Segage, M. 2014. Twenty years of faltering "Democracy": service delivery planning and public participation in South Africa. *Journal of Public Administration*. 49(1):392-405.
- WHO. 2019. Water and sanitation. Regional office for Europe. Available at: www.euro.who.int/en/health-topics/environment-and-health/water-and-sanitation/data-and-statistics.