e-ISSN: 3046-966X
Journal of Geopolitics and Public Policy
Volume 2, Issue 1 May 2024

Sustainable Management of Rural Water Resources in South Africa

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ABSTRACT

Water, being a scarce and critical natural resource for the survival of humankind, must be effectively managed. Despite transitioning to a democratic state in 1994 and the introduction of legislation to address rural poverty and inequalities inherited from the apartheid legacy, development has been uneven with rural areas bearing the brunt of under-development. The authors argue that water governance systems are considered more effective when they build on good governance and consider public perception and inputs in the management of water resources and infrastructure. The study focused on key challenges in water governance in South African with a focus on rural areas. This includes issues related to public perception and corruption in water governance. A qualitative desktop research method was adopted to address the main concerns in this paper. The study findings reveal that, although significant strides have been made to transform the water sector governance, rural communities remain disproportionately affected by the supply of water. This could be attributed to poor infrastructure, inadequate funding of rural projects, and more importantly a lack of intergovernmental coordination to ensure that water is delivered to vulnerable rural communities. Improving the efficiency and effectiveness of the water governance sector, including considering the perceptions of the community and addressing corruption in the sector, would be instrumental in realising the 2030 vision of the SDGs, and realising the overall vison of a 'better life for all'.

Keywords: *Governance, Participation, Corruption, Political Interference, Human Rights*

BACKGROUND

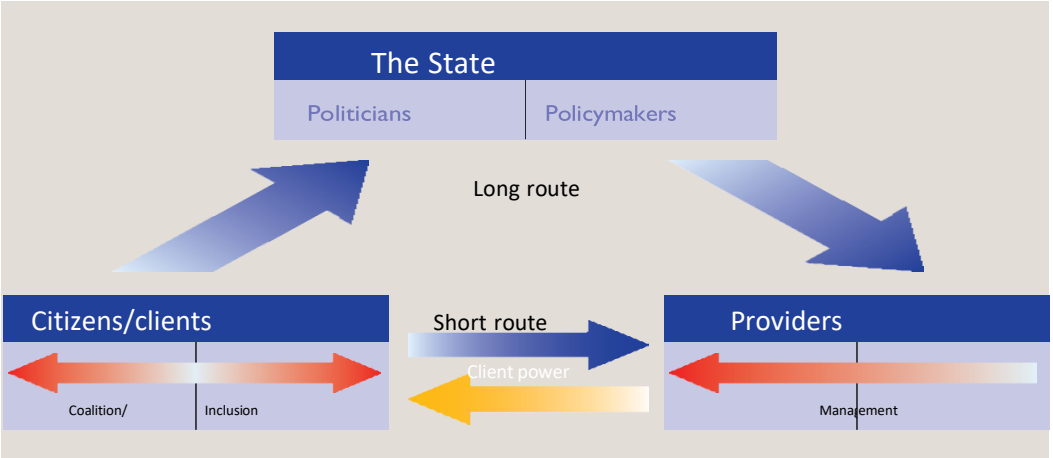
Water shortages has been cited as one of the critical challenges facing most countries around the world and the developing nations, in particular. For example, South Africa faces an estimated backlog of approximately 1.4 million households who do not have access to clean water (The Global Risk Report 2019). In addition, the World Bank Report (2017) states that, in 2015, 844 million people remained without access to basic water services, and an estimated 2.1 billion without access to safely managed drinking water services. Most of these cases were found in rural areas (World Health Organisation (WHO) and United Nations Children's Fund (UNICEF) 2017). Despite increasing evidence that integrating public perceptions of water quality helps improve water governance processes, only a limited volume of research addresses this topic in the developing countries (Mema and Motheba 2018:103). In line with this Van Der Linde and Ferries (2010) state that, while the benefits of understanding public perceptions on water governance are widely accredited in the environmental and ecological scholarship, only

limited research (see Norström, McConville and Kain, 2009) focuses on community perceptions of water service quality.

The aspect of water sector governance was the central theme of the 2004 World Development Report, which identified a framework for analysing accountability relationships between a triangle of policymakers, water service authorities (WSAs) and the public (World Bank, 2017). Within the context of this framework (see Figure 1), water service delivery policies can be implemented using a "long route of accountability" in which citizens elect public representatives who in turn influence service delivery policies. With the "short route of accountability" citizens directly influence local WSAs in the endeavours to facilitate water service delivery that meet public perceptions (Fiszbein, Ringold and Rogers, 2011). For both routes to work, public perceptions and input regarding the efficiency and effectiveness of these routes provides essential feedback on the quality of services delivered.

The importance of public perceptions and input on water sector governance has a particular resonance in the country's legislative and policy framework the promotes the attainment of Basic Human Rights (BHR). For example, the Constitution of the Republic of South Africa (Act 108 of 1996) (here after referred to as the 1996 Constitution) enshrines the Bill of Rights, meriting equal access to services such as water as a BHR (RSA 1996). Furthermore, the 1996 Constitution advocates for good governance in the provision of community services. Good governance in the context of water governance depends on resilient leadership, flexibility and agile institutions dealing with water service quality and how efficiently, effectively, prudently, and sustainably the resources are managed. Section 152(e) of the 1996 Constitution promotes public participation in policymaking and service delivery planning.

Figure 1. Accountability Framework for Water Service Governance



Source: The World Bank, 2004

e-ISSN: 3046-966X
Journal of Geopolitics and Public Policy
Volume 2, Issue 1 May 2024

LITERATURE REVIEW

Conceptualising Governance

The concept 'good governance' is difficult to explain. Put succinctly, Gisselquist (in Jarbandhan, 2021) concludes that "it is an extremely elusive object". The term 'governance' is often used within a wide context. Hence it has come to mean corporate governance, international governance, national and local governance. According to Prinsloo (2012:3), governance "is the process of decision-making and the process by which decisions are implemented or not implemented". Mayntz (2003) states that the word 'governance' at some point simply meant governing, a focus on the process. However, more recently, the term 'governance' "refers to a basically non-hierarchical mode of governing, where non-state actors participate in the formulation and implementation of public policy". In the early-2000s, the term posed a shift from a "more interventionist state and hierarchical control to modern governance (which) has first been studied closely, the crucial experience that triggered the change was the failure of ambitious reform policies that had been pursued after the end of the Second World War and the immediate post-war reconstruction period" (Mayntz, 2003).

Cleaver and Franks (2005) support the view that governance can be contextualised differently. The authors reference the Institute of Governance in Canada (in Bakker 2003), where governance involves different sections of society through the concept of stakeholders. They also highlight the concept of 'governance' to focus on "how power is exercised in the management of a country's economic and social resources for development" (Grindle 2000 in Cleaver and Franks 2005). The United Nations Development Programme (UNDP) (2001) defines governance to broadly represent "the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences" (UNDP 2001 in Cleaver and Franks 2005). The United Nations (UN) captures the principles of good governance, as outlined in Figure 2

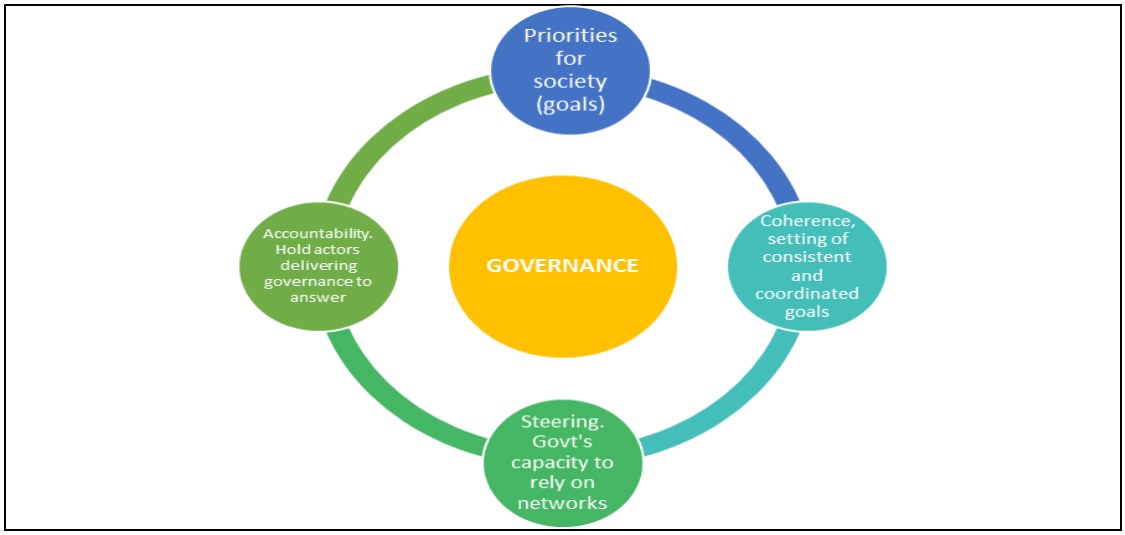
Figure 2. Principles of good governance

Source: UNDP, 1997

e-ISSN: 3046-966X
Journal of Geopolitics and Public Policy
Volume 2, Issue 1 May 2024

Peters, Pierre and Randma-Liiv (2010) are of the view that governance can be represented through four classic activities, something they term 'the components of governance'. The role of societal actors across each of these roles are more pronounced, as outlined in Figure 3 below.

Figure 3. The four activities associated with Governance



Source: Adapted from Peters *et al,* 2010

Notably, the concepts of 'governance' and 'good governance' has often been rebuked because of the burden placed on countries to meet certain conditions of 'good governance' by, for example donors. The issue of donor funding sometimes mean that governments are more accountable to donor agencies than to their citizens. Moreover, aid may also weaken the administrative capacity of countries that depend heavily on aid (Dijkstra 2017). The continuation of this agenda supports dependency and dominance. Furthermore, it sustains global power dominance, to the detriment of poverty alleviation.

Conceptualising Water Governance

Jacobi (2009 in Jacobi, Stefano, Lopez-Gunn and Empinottoi 2014:286) defines 'water governance' as "a system that makes water management more effective, accountable and participatory, thus strengthening the role of multiple stakeholders in institutional capacity building, improving coordination, broadening participation and consolidating partnerships". Moreover, there is a "need for adaptive institutions that strengthen democracy and promote growth and social development" (Jacobi *et al.* 2014). Jacobi *et al.* (2014) are of the view that the lack of capacity among institutions to adapt to the water challenge may lead to poor water resource delivery. The lack of consequences regarding the poor implementation of water policies and a lack of transparency and accountability are further reasons for the poor supply of potable water. Additionally, they argue that the building of institutional capacity for delivering economic and efficient water services requires strong institutional capacity and systems (Jacobi *et al.* 2014).

Cleaver and Franks (2005) cite Rogers and Hall's (2002) definition of water governance, where "water governance refers to the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society". In addition, the Council for Scientific and Industrial Research (CSIR) (Online source 2021) refers to the concept of 'water governance' as "the political, social, economic and administrative systems in place that influence water's use and management. Essentially, who gets what water, when and how, and who has the right to water and related services, and their benefit". Jiminez, Saikia, Gine, Avello, Leten, Lymer, Schneider and Ward (2020) focus on water governance as constituting three overarching elements, i.e. the 'what' (the functions), the 'how' (the attributes) and the 'what for' (the outcomes) before offering the following comprehensive definition of water governance. "Water governance is a combination of functions, performed with certain attributes, to achieve one or more desired outcomes, all shaped by the values and aspirations of individuals and organisations". Table 1 below captures the governance principles as it relates to water governance.

Table 1. Principles of Water Governance

Principle/S	Explanation
Openness and transparency	Water institutions should work in an open and transparent manner, using language that is understandable to the public; water policy decisions should be transparent, particularly regarding financial transactions.
Inclusiveness and communication	Wide participation should be ensured throughout the water policy chain, from conception to implementation and evaluation; governance institutions must communicate among water stakeholders, both horizontally at the same levels and vertically between levels.
Coherence and integration	Water policies and actions must be coherent, with political leadership and a strong responsibility taken by institutions at different levels; water institutions should consider all potential water users and sectors and their linkages with, and impacts on, the traditional water sector.
Equity and ethical foundation	Equity between and amongst various water interest groups, stakeholders and consumers should be carefully monitored throughout the policy development and implementation process; penalties for corrupt behaviour or sharp practices should be applied equitably – water governance must be strongly based on the ethical principles of the society in which it functions and on the rule of law.
Accountability	The rules of the game, as well as legislative roles and executive processes, must be clear; each water-related institution must

	explain and take responsibility for its actions; penalties for violating the rules and arbitration-enforcing mechanisms must exist to ensure that satisfactory solutions to water issues can be reached.
Efficiency	Concepts of political, social, and environmental efficiency related to water resources must be balanced against simple economic efficiency; governmental systems should not impede needed actions.
Responsiveness and sustainability	Water demands, evaluation of future water impacts, and past experiences should be the basis for water policy; policies should be implemented, and decisions made, at the most appropriate level; water policies should be incentive-based, to ensure clear social or economic gain if the policy is followed; long-term sustainability of water resources should be the guiding principle.

Source: Adapted from Rogers and Hall (in Mdhlovu, 2018)

The quest for unpacking water governance is necessitated by the need to reduce risks, especially in challenging times like droughts. It is anticipated that a strong governance model to underpin water as a crucial resource is critically needed, given the impacts, scarcity, and commodification of water.

METHOD

The research methodology employed in the article is premised on specific paradigms of unobtrusive research techniques, including conceptual and documentary analysis. Unobtrusive research refers to methods of collecting data which does not interfere with the subjects under study (because these methods are not obtrusive). Data analysis is explored through an in-depth analysis of case studies that demonstrate the extent to which the country's good water governance positions influences the positive trajectory of the sustainable development global agenda and other national imperatives of the South African government. More specifically, the methodological approach of the paper sampled secondary literature that presents findings of water service quality in the rural backgrounds of the country, mainly in the Eastern Cape Province. A purposive sampling of approximately 13 sources spanning 15 years (2005-2121) reveals various initiatives of water sector governance that have produced water services to meet public perceptions.

A comprehensive study conducted by Statistics South Africa (StatsSA) in rural municipalities in 2017, using a qualitative research design and the methodology included literature reviews and documentary analyses revealed various perceptions of community about water service delivery in their respective communities. For example, respondents were asked to rate the overall performance of rural municipalities using a five-point scale (ranging from 1: 'very bad' to 5: 'very good'). Furthermore, respondents were asked whether they felt the overall performance of these municipalities had worsened, stayed the same or improved in the previous three years. Most communities (58%) expressed their

levels of satisfaction with the way in which water services were managed and provided to communities. In this survey, public concerns (approximately 46%) in relation to fraud and corruption, lack of good governance, poor management of water resources and infrastructure were cited as major source for their dissatisfaction. The General Household Survey (GHS) released by Stats SA supports the role played by the DWS. In 2018, the report showed that 89% of households had access to drinking water (piped or tap water) in their dwellings (off-site or on-site) and 83% had access to sanitation (Stats SA online 2018).

Diverse research in development studies have indicated that rural poverty has continued to grow steadily. This is since economies have become more complex, with a shift from agriculture to manufacturing. The rural poor live in economically deprived conditions. As resources are spent in favour of urban development, small-scale farmers and small-scale rural tourism authorities face ongoing challenges to their livelihoods. Moreover, the decentralised model of cooperative governance has its own set of challenges and rural communities are often marginalised from the development debate. Given that three quarters of the world population live in rural areas, one can argue that this is a model is not sustainable (Ashley and Maxwell 2001). The debate around land use in South Africa is complex, given the history of the country. This does not focus on the complexity of land issues, but cognisance must be taken of the impending factors that affect the overarching question of land.

RESULT AND DISCUSSION

Public perceptions on water Governance: A good governance perspective

The private sector, for example Rand Water, plays a strategic role in the roll-out of water resources. They assist regional and municipal governance in providing water services. Moreover, donor organisations such as the European Union (EU) provide limited funding for water and sanitation projects in South Africa. Transboundary partnerships, for example the Komati Basin Water Authority, which is a partnership between South Africa and the Kingdom of Eswatini, is responsible for the maintenance of the Maguga and the Driekoppies Dams in terms of providing water resources (Beck *et al.* 2016).

One of the fundamental duties of government is to meet citizens' service delivery expectations. Therefore, the Expectation-Perception Theory (EPT) argues that expectations, coupled with perceived performance, lead to client (citizen) satisfaction. EPT is mediated through positive and negative expectations (Tse and Wilton 1998). For example, if government services exceed public expectations (positive expectations), it will lead to satisfaction. If a product falls short of expectations (negative expectations), the consumer is likely to be dissatisfied. Tse and Wilton (1998) creates a formula that give effect to EPT, which is expressed as: Service Quality + Service Expectation = Perceived Service Quality + Customer Satisfaction. This formula simplifies EPT. It implies that the aspect of service quality and perceived service quality can be managed and controlled by service providers (governments) to satisfy customer needs.

Since the introduction of South Africa's democracy in 1994, governance systems within all government spheres have improved significantly. Nonetheless, much still needs to be done to promote service delivery that meet public expectations. The democratic principles outlined in the 1996 Constitution have created new expectations and perceptions of a "new dawn", especially rural and previously marginalised communities' realisation that their predicaments of basic services, including water supply, will be prioritised. The literature reviewed points to a strong correlation between the global communities with poor water service delivery systems and those who have failed to implement good governance (African Development Fund 2018). Therefore, improving water access to community services in these communities should include a wide range of factors, including encouraging a culture of public participation, policy implementation, institutionalisation of good governance, and responsible actions by local citizens. Prinsloo (2012) is of the opinion that good governance and quality service delivery play an instrumental role in protecting human rights. The UN (2015) lists these elements as: participation, accountability, transparency, justice, efficiency, effectiveness, equity, responsiveness, and strategic vision.

The concept of 'governance' implies two critical aspects, namely a macro- (country levels) and micro-level (institutional level) (The UN Water Rights 2016). From a South African perspective, these aspects play an instrumental in the governance of water services (African Development Fund 2018). Against this background, sound water governance is premised on the notion of good governance at a macro- and micro-level. Water service governance at a macro-level includes the application of economic, political, social and administrative powers to manage water service delivery. It also describes processes and mechanisms through which communities mobilise support and exercise constitutional powers to access clean, quality water (The UN Water Rights 2016:73). Water governance can also be understood as a process where governments at the regional, central and local levels act as primary agents with legislative rights to co-ordinate water services and other necessities that promote social well-being. From a South African perspective, the legislative and policy framework and the various actors who promotes water service delivery serve as examples of water governance (Sershen, Rodda, Stenström, Schmidt, Dent, Bux, Hanke, Buckley and Fennemore, 2016).

Sershen *et al.* (2016) state that effective water sector governance plays an instrumental role in achieving the vision of reversing the tides of poverty, inequalities, marginalisation, and social exclusions facing most disadvantaged communities. For example, most South African rural communities do not have access clean water even though the 1996 Constitution enshrines the right for all citizens to be supplied with adequate, clean water. Notably, it is estimated that by 2030, several African nations will lack access to clean water. As it stands, 11 of these nations are at a verge of water stress, while 15 countries suffer critical stages of water shortages (Sershen *et al,* 2016).

Water Corruption in South Africa

The political and economic transformation of South Africa has undergone several stages. Given the social realities facing the country, the general feeling is that the hopes of the entire population expressed in the first decade of democracy have tapered into disillusionment and lack of trust. The roots of such popular sentiments have been epitomised by peaceful and/or violent community projects and student revolts within multiple constituencies. The lack of service delivery in South Africa has been the result of a multiplicity of factors related to political and economic foundations, state weaknesses at different levels, administrative incompetence and mediocrity, skewed transformation paths and corruption. To understand the crucial importance of corruption as a fundamental barrier to community health and development, especially rural development, a brief background on the destructive consequences of water corruption in Africa is detailed below.

Although it is known that most countries in the African continent lack the stability, finances and investment to attain proper water and sanitation, corruption among all state echelons has been a key element in this regard. This corruption takes on several forms and within different structures and functions of the public service, such as the supply chain and procurement sections, as well as bribery and fraud among politicians and administrators (Plummer and Cross, 2006). Research has shown that, throughout Africa, collusion among government officials, private sector water vendors, mediators and large farm owners has led to misappropriated funds. Furthermore, communities do not receive what was promised to them, while there is a complete lack of planning and implementing laws protecting water sources from pollution and encroachment. Corruption denies millions of poor people in Africa their human right of access to clean and safe drinking water. The lack of clean and potable water due to corruption is a serious barrier to sustainable service delivery. Furthermore, it has limited the participation of poor and affected communities in developmental processes and initiatives (Odiwuor, 2013).

Mantzaris and Pillay (2019) have shown empirically that corruption throughout the years has had a negative effect on South Africans' socio-economic well-being. The existing inequality in community access to water and sanitation, in general, has been one of the most important examples of this reality. In pioneering research, Mudombi (2020) unpacked access to water and sanitation in South Africa. It pointed to progress in the terrain of delivery of these life necessities. However, in 2016, only 43% of South African household had adequate access to water services (meaning access was good across all dimensions), while 93% of South Africa's households had access to improved water sources. In terms of sanitation, only 25% had adequate access to such services, while 80% of the households had access to improved sanitation facilities.

Throughout the many years of democracy, the current DWS has change names occasionally (Department of Water Affairs and Forestry in 1994, Department of Water and Environmental Affairs in 2009, and its present name since 2014). Nonetheless, the

corruption levels continued to increase at all levels. Thus, in 2020, during its first meeting of the Parliament's Standing Committee on Public Accounts focusing on the analysis of investigations on irregular expenditure within the department and water boards, it was generally agreed on the following: The realities of the COVID-19 pandemic demanded – especially from the department – the rigorous application of honest, accountable and sound financial management disciplines that are instrumental in defeating corrupt practices. During this process, it was stated that, for the department to ensure sound governance, there should be a proper and regulations-based accounting and recording system for all transactions. Undeniably, this does not occur during present transactions. It was suggested that the political and administrative leadership of the department should approach the Auditor-General in South Africa for support in the process of implementing preventative control activities within all departments and sections.

During the 2018/2019 financial year, all the entities attached to the department were recorded as not complying with key legislation. This especially related to the prevention of irregular expenditure, lack of consequence management and conditional grants not spent for their intended purpose. Within this circle of corruption, wasteful and fruitless expenditure increased from R546 million to R754 million due to overdue invoices, interest rates and exorbitant management fees. On the other hand, Irregular expenditure increased from R4.227 billion to R5.694 billion in comparison to the previous financial year (Parliament of the Republic of South Africa 2020b).

Most of these corruption-related realities are similar to findings by the Auditor-General and the Parliament's Standing Committee on Public Accounts. These entities agreed that "the management of the National DWS had collapsed'' because of the corrupt actions during the 2017/2018 financial year. This reality was the result of corrupt acts that had led to billions of rands in irregular expenditure, huge debts and failed projects. Thus, there is a need for a scientific and research-based analysis of the impact of these realities and future plans to devise strategies for controlling such situations. However, for these plans to become a tangible reality, the first clear necessity is to analyse and dissect the real meaning of corruption and the recognition of its different and perpetually widening forms (Water Integrity Network/ Corruption Watch 2020). Corruption does not only flourish in the national department and its entities and sections but also at provincial and local government levels. In this regard, district and local municipalities are directly related to efficient, effective, transparent and accountable water and sanitation service delivery within their respective communities.

Case of Makhanda Municipality (Eastern Cape Province of South Africa)

The case of Makhanda (also spelt Makana), previously known as Grahamstown in the Eastern Cape, is interesting as its population has faced serious crises evident in many other areas in South Africa. However, Makhanda has a unique angle, as most of its residents have been living without running water or with seriously contaminated water for years.

The municipality has been placed under administration for corruption and complete service failure (Nowicki et al, 2020).

Since early 2012, the local municipality was unable to provide water, especially to the rural population. By the end of 2013, massive popular protest mobilisations, in both rural and urban areas, convinced the then Minister of Water Affairs, to intervene and stop the water outage. The seriously disturbed water situation over the years, especially in the African townships, rural areas and informal settlements, was challenged to the city's high court. This was initiated by an application brought forward by several civil society organisations (CSOs) spearheaded by the Unemployed People's Movement (UPM) against the municipality, the Provincial Government of the Eastern Cape and several others in February 2019. It accused Makana Municipality of corruption, failure to provide water and sewerage services and serious neglect of municipal infrastructure.

The previous (January) ruling of the court to place the municipality under administration for violating its constitutional mandate by failing to provide basic services to the community was correct. Hence, the judge declared the legal right of the court to dissolve a sitting council. In this regard, the behaviour of the municipality was unlawful because it contradicted the constitutional mandate. Hence, the court was not only entitled but mandated to invoke the provisions of 172 (1) (b) of the 1996 Constitution. What strengthened the court's verdict, the judge said, was the non- existence of any rebutting evidence on the part of the municipality on the issues dealt with the legal process. On the contrary, he indicated, the municipality by virtue of its inaction, had not approved any measures deemed necessary to provide the plans and actions that could be valuable in the success of the financial recovery plan.These were the legal responses to the municipality and provincial government's argument for leave to appeal that was presumably based on the principle of separation of powers. The municipality's application for leave to appeal argued that the court did not have the power to dissolve an elected council and that the original judgment did not acknowledge the improvements to service delivery since the adoption of a financial recovery plan in 2015.

Conclusion

Improving the efficiency and effectiveness of the water governance sector plays an instrumental role in realising the 2030 vision of the SDGs. The main objective of this article was to examine the complex water governance systems in South Africa, with specific reference to the rural communities of the Eastern Cape Province. The article endorsed various aspects that the government and other water service authorities should consider to improve water service provision in South Africa. The lack of efficient and effective policy implementation is the root of challenges facing the water sector governance (Haigh, Fox and Davies-Coleman 2018). Therefore, to achieve an excellent level of water service delivery, sound policies should be created as they are essential the functioning of any democracy. However, it is also imperative to note that sound written policies without proper implementation serve no purpose.

The South African WSA stands at the threshold of major restructuring to address inadequacies because of the fragmented service delivery systems characteristic of the apartheid era. Public participation is important in water service delivery planning, and in this regard, equal access to clean water should be prioritised for rural communities, women and children. To develop an inclusive understanding of water service delivery in South Africa, it is important for the government sectors to implement effective public participation strategies. This view is aligned with the assertions of n that, "Improving public participation is instrumental in addressing water service delivery challenges at community levels". The literature-based evidence also suggests that true public participation can increase the efficiency, effectiveness, self-reliance, coverage and sustainability water resources, mainly in rural areas. The assumption is that public inputs in governance affairs can enhance local democracy and improve local communities' quality of life.

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