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REVIEW ARTICLE

WATER GOVERNANCE AND SOCIAL EQUITY IN SOUTH AFRICAN RURAL MUNICIPALITIES: A CASE STUDY OF A DISTRICT MUNICIPALITY IN THE EASTERN CAPE PROVINCE

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ABSTRACT

COVID-19 has put addressing inequality in water service provision on top of the global agenda by exposing the high risk posed by the level of water service provision in South Africa. While post-apartheid reforms have improved access, ensuring equity in water service provision has remained a challenge. Therefore, this study examined factors affecting water governance and social equity in rural municipalities and reflects their effects on water service provision. The study adopted a qualitative case study research design and purposive sampling method. Focus group discussions, participant observation, and semi-structured interviews supported by document analysis were used to collect data. Findings revealed that socioeconomic, environmental, institutional, and governance factors highly affect water services resulting in a huge rural-urban gap. The paper concludes that achieving social equity in a society deeply entrenched with inequality, realising human rights, and achieving universal access to water calls for an integrated approach to sustainable development.

KEYWORDS

Service Delivery, Social Equity, Sustainable Development, Rural Development, Water Governance.

1. INTRODUCTION

The racial policies of societal segregation of the white South African Apartheid regime (1948-1994) resulted in high inequality in access to water and sanitation and other public services (Ramírez et al., 2019). The period was associated with race, gender, and class as dominant factors mirroring access to public services in the country (Ramírez et al., 2019). Such inequality led to the recognition of social equity as an important pillar in water governance to rebuild an equal society and regain dignity for those who have been disadvantaged since 1994. Thus, social equity became one of the major central goals of public water policies and has featured among various water policy debates to redress the disparities in water service provision worldwide. In defining the term, social equity has been referred to as applying fairness and just practices in public policy implementation and public resource distribution, while water governance has been defined as those systems that determine who gets what water, when, and how, and who has the right to water and related services and benefits (Lee, 2021; Jimenez et al., 2020). Water governance is inherently complex and strongly linked to the critical domains for developmental needs such as health, environment, and poverty alleviation, among others (Enqvist and Ziervogel, 2019).

While establishing the link between water governance and social equity, the study noted that social inequities and inequality in water service provision can potentially induce conflicts, hunger, insecurity, and violence hampering economic growth and poverty reduction efforts while creating a polarized society (Bayu et al., 2020). Hence, achieving social equity in water governance is critical in addressing inequality concerns by ensuring that processes, procedures, and decision-making in resource distribution are just and fair. The process entails that those who are disadvantaged are recognised, and their rights, needs, and voices are considered in water-related matters (Human Right 2 Water, 2021). Furthermore, ensuring social equity provides for the development of social policies focused on addressing the needs of the poor and vulnerable groups through a sense of shared responsibility amongst the three spheres of government, civil society, the private sector, and policymakers to achieve societal, economic and environmental benefits of effective water governance (Akhmouch et al., 2018). As a result, there is a need for water governance to always be conscious of justice and equity (Enqvist and Ziervogel, 2019).

Literature indicates that great attention has been given to social equity in relation to water and sanitation, however, achieving this goal remains a challenge, especially in rural areas (Hall et al., 2018). Partially this is attributed to a lack of understanding of the context-specific factors that affect water governance and social equity. Yet, such an understanding is critical in addressing water issues as water challenges are context-specific and place-based. This scenario, therefore, calls for the need to fully understand each context and formulate specific strategies tailored to each context. Against this background, the objective of this paper, therefore, is to examine the factors affecting water governance and social equity in a rural municipality in the Eastern Cape Province in South Africa.

2. BACKGROUND

The case of South Africa mirrors the state of most developing and developed countries in terms of water service provision. This state can be further reflected by the global statistics, which indicate that about 2.1 billion and 4.5 billion people across the globe lack access to safe and clean

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water and proper sanitation, respectively (Olagunju et al., 2019). Furthermore, some researchers highlighted that the African urban population is projected to rise from 11.3% in 2011 to 20.2% in 2050, while 1.1 billion Africans are projected to be living in severe water stress countries (South Africa included) with enormous, social, environmental and political consequences by 2025 (Ramírez et al., 2019; Adom and Simatele, 2021). These statistics, therefore, reflect the misery and injustice suffered by those lacking access to water services in the past, present, and future due to various factors such as limited human, financial, and technical capacity (National Business Initiative, 2019). Looking at the South African context, the country enacted new policies and devised new strategies to realise these societal goals (Adom and Simatele, 2021). However, the National Business Initiative report indicated that about 80% of the institutions (Water Service Authorities) responsible for water service provision at the local level are dysfunctional and are operating at high risk, and as such, these water institutions are far behind in achieving the goal of social equity (National Business Initiative, 2019).

On a complex note, water challenges are context-specific and place-based. As such, addressing these concerns requires great knowledge regarding each context so that proper strategies can be devised to address the problems at hand. This was also noted by the OECD observations that "information is power. Information is the new currency" (OECD, 2015). Therefore, enhancing access to water services requires precise, accurate, and up-to-date information regarding water governance. However, in practice, many countries, states, and institutions are still lagging, and a huge asymmetry of information exists between authorities, end-users, service providers, and other stakeholders (in voluntary) hence a significant gap already noted by the (OECD, 2015).

3. Contextualising Water Governance in South African Municipalities

Current water governance in basic water provision in South Africa is regulated through *the National Water Act*, which dictates how water resources are managed, protected, and conserved. The *Republic of South Africa Constitution of 1996* Chapter 2, The Bill of Rights, established as the human right dimension with prominence to access adequate and sustainable water supply. The *Water Service Act,* which empowered people with the right to water and sanitation and as such it focuses on providing water service provision to the public (Act No 36 of 1998; Act No 1997; Adom and Simatele, 2021). Local Government Acts such as the *Municipal Systems Act,* provide for the planning and participation processes, while the *Municipal Structures Act* and the subsequent amendment Act of 2000 provide for the powers and functions in terms of water provision between the district and local municipalities (Act No 32 of 2000; Act No. 117 of 1997). The *Municipal Financial Management Act* regulates municipal financing (Act No 56 of 2003).

As such, the municipalities have an implementing role in delivering water services on the ground while the Department of Water and Sanitation maintains regulatory, monitoring, and evaluating roles. Furthermore, the Integrated Water Resource Management, and the National Water Resource Strategy also highly influence water service provision in South Africa along with the *Free Basic Water Service policy of 2001* which was meant to redress the disparities in water governance by addressing affordability concerns (Makaya et al., 2020). South African water governance system is, therefore, a three-dimension system including the principles and mandate, policies and legislation, regulatory framework, institutional arrangements and practice; international, national, regional, and local neighbourhood levels, and shared responsibility among the government, private and the civil society (Makaya et al., 2020). A system focused on ensuring that all stakeholders ensure that the basic human right to water services is met. As such, the next section provides the theoretical foundations underpinning water governance in South Africa.

3.1 The Human Rights-Based Approach and Water Governance

Water governance can be traced back to the notions of the Human Rights-Based Approach (HRBA), in which water and sanitation are considered human rights. These theoretical foundations have been further solidified by international declarations such as the Dublin Statement on Water and Sustainable Development, the International Covenant on Economic, Social and Cultural Rights (ICESCR) Articles 11-12, the Human Rights Declaration, the Millennium Development Goals (MDGs) and the current Sustainable Development Goals (SDGs) (Water and Sustainable Development, 1992; Ramírez et al., 2019; Human Rights Declaration, 2010; Millennium Development Goals (MDGs), 2015; Sustainable Development Goals (SDGs), 2030).

South Africa has recognised these services as part of human rights through the Constitution, Chapter 2 Bill of Rights. In establishing human rights, a group of researchers argued that while some rights are acquired, for instance, through contract, human rights are received because we are human, and they are intrinsic to everyone, and such rights include the right to sufficient water and proper sanitation (Ramírez et al., 2019). Furthermore, the aforementioned scholars argued that these minimum requirements defined as human rights are not optional and are not a voluntary legal disposition adopted or abandoned depending on the humour of each government (Ramírez et al., 2019). This implies that the right to water and sanitation remains inviolable and inalienable even if dismissed or trampled on by governments or communities, and as such, the rights belong to the people's dignity. Therefore, South African Water Service Authorities (WSAs), along with the provincial and national government as duty bearers, are mandated to ensure that water services are provided to the public fairly and justly while the public, as rights holders, should hold the state responsible and accountable for the decisions made in water-related matters.

However, literature and empirical studies reflect that these institutions face challenges in addressing water problems and as such, inequalities remain prevalent and water scarcity problems unresolved. A group of researchers observed that a water crisis is not simply a matter of managing too little or too much water but is often a governance crisis where the established water institutions fail to be resilient (Enqvist and Ziervogel, 2019). In light of these arguments, the paper, therefore, argues that the alignment of the HRBA principles and governance principles provides the foundations and basis for resolving the governance crisis and addressing water scarcity problems and the achievement of justice in water governance (Human Right 2 Water, 2021).

This is critical in addressing water governance factors, eradicating backlogs, and ensuring fair practice by prioritising those who have been disadvantaged, marginalised, and those who lack access to water services. Therefore, the state as duty bearers should ensure that these groups access water services, while the public and end-users as right holders should be responsible and play their part by paying taxes and protecting their infrastructure and water resources (Kaiser and Eberhard, 2019; Maramura,2018). Such an approach drives municipalities towards enhanced water service provision by prioritizing social equity as the core of effective water governance.

3.2 Framing Social Equity as the Core of Effective Water Governance (Theory of Justice: Rawls' 1971)

Achieving social equity in water governance is crucial as it primarily focuses on people and not water itself. As such, understanding the distribution of water resource benefits/costs and their influence on various societal groups, particularly those who lack access, is fundamental in achieving universal access to water, realising human rights, and ensuring social equity. Therefore, Rawls' 1971 works provide theoretical foundations for establishing justice policy decisions and institutions responsible for water service provision. In his argument, Rawls calls for equal freedoms, differentiated equality, and equal opportunities as the principles to establish social equity in public institutions (Rawls, 1971; Chung, 2018). International declarations such as the current SDGs (2030) recognise inequalities in water service provision by stressing that water reforms should consider vulnerable groups such as women, the poor, and minority groups (UN-Water, 2019). As such, applying a theoretical lens that builds on social justice theories is essential in developing pro-poor policies such as target intervention and subsidisation to ensure access to those lagging groups. These aspects are critical in South African water governance, which had been deeply entrenched with the legacy of colonial and apartheid racial discrimination policy regimes, which justified the racial deprivation of the black majority to equal access to equitable opportunities, education, housing, human dignity, water and sanitation (Ramírez et al., 2019).

4. Research Methods

The study adopted a constructivist philosophical paradigm deeply rooted in human experiences, emotions, and views as key aspects of understanding reality. Constructivists believe that reality is socially constructed and subjective, and as such, it provided for the adoption of a descriptive and explanatory qualitative case study research design and an inductive research approach for this paper. The case study provided room for collecting rich and in-depth information regarding water governance factors and achieving social equity in the rural municipality in the Eastern Cape Province, South Africa. The study focused on gathering relevant data from knowledgeable people, and as such, a purposive sampling method was adopted. Twenty participants (n=20) were selected for semi-structured interviews, and these included the top management officials

involved in decision-making, councilors and local municipality representatives, head of satellites in local municipalities, academia, and a representative from the Water Boards.

The study also engaged in two focus group discussions (n=14) with community members as stakeholders in water governance and to understand their experiences as final users of water services. Participant observation was also utilised to collect data, and this was done through a field tour in one of the satellite municipalities. Lastly, the study utilised secondary data in which documents such as municipal annual reports, Integrated Development Plan, Auditor General [South Africa] reports, and other related journals and articles were utilised. This enabled the triangulation of data sources and ensured the credibility of the study. Ethical considerations were observed, and these included anonymity and confidentiality of participants. Permission was sought and granted from the municipality, and approval was granted by the University of Fort Hare Research Ethics Committee as the gatekeepers, which assessed the risk and harm associated with the study.

5. Results and Discussions

This section presents and discusses the study findings around the themes that emerged from the data collected. To give voice to and illustrate participants' perceptions, the researchers used verbatim quotes.

5.1 Environmental Factors

5.1.1 Water Resource Availability

The study established that low rainfall patterns have resulted in drought, affecting water provision in the District Municipality. Officials interviewed highlighted that the situation has exacerbated water supply and management pressure, particularly in rural areas, as the habitats heavily relied on natural water sources. In support of the document analysis which revealed that drought has affected the municipality since 2015 officials highlighted that dam levels are always low, and this has affected the quantity and availability of water to the communities (Amathole District Municipality, 2020). The claim was consistent with focus group discussions which revealed most communities have been left vulnerable and threatened as they have been relying on natural water sources. This finding confirms Romano & Akhmouch's observation that megatrends such as population growth and climate change greatly impact water governance decisions as they exacerbate water users' competitors (Romano and Akhmouch, 2019).

While sixty percent of the participants agreed that drought had increased the level of disparities in access to water, five percent disagreed with this notion by arguing that it is the municipality's incapacitation and unpreparedness that have led to poor service delivery. When commenting on this issue, one respondent from academia noted that:

It is not only District Municipality that has been affected by drought, other metropolitans such as Cape Town in the Western Cape Province almost faced Day Zero, but they survived [Academia].

This finding was also noted by Makaya et al., (2020) who conducted a study in a village in Limpopo province in South Africa on building local drought resilience. They argued that the lack of coordination in drought mitigation programs and policy implementation on better risk management when dealing with disasters such as droughts makes the impact unbearable (Makaya et al., 2020). A situation that he considered to be not a unique failing in the South African government. Furthermore, a study conducted in Cape Town by Enqvist and Ziervogel (2019) revealed that the same drought-afflicted different parts of the country was prolonged and could be traced back to 2015. The same case could be related to District Municipalities. However, (Enqvist and Ziervogel, 2019) further highlighted that the city's response to water shortages highly determined the drought severity.

Despite the differences in opinions, the study concluded that low rainfall coupled with the unpreparedness of water institutions to implement disaster management plans and mitigate the impacts have disastrous effects on water provision. The situation further aggravates the disparities in water services provision and impedes the realisation of other rights as communities must spend long hours traveling or waiting in queues to fetch water.

5.1.2 Technical Nature of Rural Areas

The country's human settlement patterns were developed around mineral deposits creating geographical inertia and incompatibility between water demand and water availability. Furthermore, this geography of water was perpetuated during apartheid, where huge disparities across the country in terms of water services and in particular the rural and peri-urban where water has been less accessible (Peters and Woodhouse, 2019). The technical nature of rural areas emerged among the factors affecting water governance and the level of service provision. Document analysis further indicated that the areas where social inequities are still prevalent are rural compared to the few towns in the district. The situation has been attributed to the technical nature of servicing rural areas. Like other rural contexts, the District Municipality's rural areas are scattered with a low population to be served and are associated with huge costs to service them.

Water service provision in rural areas is difficult since it is dispersed; in some circumstances, four homes share a community standpipe, and yet both fixed and variable water supply expenses must be met [official].

It is easy to communicate and make announcements in towns and locations with no water because houses are close together compared to rural areas where houses are scattered [focus group participant].

This finding is consistent with the observations that rural areas are still lagging in terms of water provision (UN-Water, 2019; Jiwani and Antiporta's, 2020). Attributing this to their technical nature, the scholars described the rural as having a high rate of poverty, low population, and low levels of income, making them more difficult to serve. The focus group discussion indicated that it is difficult for those residing in rural areas to explore safe and reliable alternative sources of water because of poverty and low-income because of these characteristics. As a result, people resort to convenient sources like rivers and dams, which do not require monetary value. In addition, the location and physical environment presented by the rural areas in the District Municipality make it difficult for people residing in these areas to access water services and engage in essential occupations.

5.2 Institutional Capacity and Governance Factors

5.2.1 Lack of Policy Implementation and Political Interference

Study findings revealed that South Africa's water reforms to guide water institutions and processes have been established post-apartheid, however, successful implementation of these policies remains a challenge. This is mainly due to the fact that reregulation is a highly dependent, continually changing process that involves "mediation" and "institutional learning." Organizations need time to comprehend it and use it to their advantage because it is iterative.

Our policy is ok; we have managed to set up good by-laws and regulations. However, we do not have the financial capacity to implement them. For example, we are not able to deal with illegal connections through our by-laws. As a result, another policy was created to legalize illegal connections through the Rural House-Hold Connection Policy. Still, it's been a year now, and it has not been implemented [official].

The finding contradicts Adom & Simatele's conclusions that South African policies are fragmented, uncoordinated, unclear, and silent on the administrative challenges worsening water quality and the steps needed to tackle these (Adom and Simatele's, 2021). They further challenged that the policies are focused on areas that are already recognised and are silent on the more critical problems of confronting these challenges (Adom and Simatele, 2021). However, both studies point out the challenge in policy implementation. Participants further highlighted that the municipality fails to implement consequence management in the institution, compromising service delivery.

The finding confirms Sutcliffe & Bannister's report, which argued that while South Africa has enabling legislation (with about 40 pieces of municipal foundation legislation showing that good governance frameworks are in place), however, the main challenge remains with the poor implementation and role players, councilors and administrators who are often not readily accessible to the communities they serve (Sutcliffe and Bannister's, 2020). It is, therefore, crucial to note that the effectiveness of a policy only lies in its implementation. Furthermore, ome scholars argue that policies do not fail on their own, but rather progress is highly dependent upon the process of implementation (Hudson et al., 2019).

Officials further attributed poor policy implementation to a lack of political will and a lack of financial capacity and political interference. Yet, adjusting to regulation and complying is highly affected by locally specific cultural and governance issues. Furthermore, the finding supports Adom & Simatele's observations that the post-Apartheid policies and strategies lack a clear direction for funding and financing of water projects and that most of the population is unwilling to pay for water services, and yet

funding sources are very limited (Adom and Simatele's, 2021).

Most of the policies are not being successfully implemented because there is a lack of political will to ensure that everyone has access to water, especially in rural areas. The Rural Household Connection Policy has been in place for more than a year and has yet to be implemented [official].

The study backs up UN-Water's contention that developing urban areas and supporting investments in urban areas receive more political attention than doing so in rural areas, and as a result, a lack of political will to enhance rural areas would always result in service delivery discrepancies (UN-Water's, 2019). Furthermore, political interference and lack of political will lead to disastrous effects on water governance resulting in the widening gap between the "haves" and the "have-nots". Realising the right to water and sanitation and achieving equitable water governance should not be limited to the availability of social policies that promote social equity but should extend to the full implementation of these policies to achieve the policy objectives. Failure of policy implementation by water institutions will always fuel the disparities in water service provision, and it is the poor and vulnerable who will continue to suffer and lack access.

5.2.2 Structural Challenge and Skills Deficit

During the Parliamentary Session held on 13 April 2021, between CoGTA and Amathole District Municipality, one of the main issues raised was the bloated organogram. The municipality's 2014 organogram had more staff at the top than at the bottom, and in 2017, restructuring was done to allow more staff to be dispersed at the ground to ensure actual service delivery. However, fifty percent of the officials interviewed indicated that there is still insufficient staff on the ground and more people in the administration. Furthermore, thirty percent added a lack of competencies as an issue in both the staff and the council as highlighted below:

There are so many people in the administration and support services and few people on the ground to do the actual service delivery and to fulfill our main goal, which is providing water and sanitation. Such a scenario affects the whole process, and this negatively affects service delivery in the end [official].

The finding is consistent with Adom & Simatele's study, which revealed that the water sector lacks professional skills and expertise despite overstaffing in the departments (Adom and Simatele's, 2021). The impact of such a situation on water service cannot be understated. It necessitates hands-on work with personnel in the field 24/7 to ensure that water treatment plants are operational, and that water is available daily. The study revealed the availability of skilled but not sufficient staff which has resulted in high levels of consultancy. The finding further confirms Sutcliffe & Bannister's report, which noted that the first local government administration after the 2000 election lacked staff with competent skills and had limited capacity to implement the raft of laws defining what should be done (Sutcliffe and Bannister's, 2020). Unfortunately, when the Municipal Demarcation Board reviewed the general competency of the personnel according to the minimum competency requirements set by National Treasury, eighteen (18) years later, they were still determined to be insufficient.

We have skilled staff, but we cannot do it on our own. More consultancy is needed when implementing projects such as water and sanitation which require various skills and competencies. We must do a lot of consultations before and during our interventions. We, therefore, have skilled staff; however, we do not have the right skills at the right levels[official].

The finding also confirms the assertion that many cities cannot manage water properly due to a lack of technical and human resources and OECD (2016) findings that the shortage of staff and managerial competencies remain the biggest source (65%) of the capacity gap (Romano and Akhmouch's, 2019). Insufficient human resources and the requisite skills in the right positions in the District Municipality have been attributed to the municipality's status (Category C servicing rural areas mostly in its jurisdiction). Economic and political constraints have also made it difficult to attract qualified personnel in such settings. As a result, there will be insufficient staff in the institutions and procedures that make water provision decisions, resulting in inequities in water availability (Mudombi and Montmasson-clair, 2020).

5.3 Socio-Economic Factors

5.3.1 Illegal Connections

Participants highlighted high levels of illegal connections in the District Municipality rural areas. The study established that while other people still resort to natural sources where the municipality fails to provide water, others have stolen water through illegal connections. As a result, several villages, particularly those in the upper areas, are left without access to water.

Some individuals are opening ridges and veldts to channel water to their areas to irrigate their crops and have water for their animals. This is sad as these people are more concerned about their well-being and living standards at the expense of others who benefit from that water [focus group participant].

While this is true that in the District Municipality, where farming is a major source of income, the human right to water for drinking and sanitation takes precedence above other considerations. Hence, people who prioritize farming above water delivery contribute to unfairness and obstruct universal water access. Moreover, illegal connections hinder access to water by other community members and put pressure on the infrastructure of the water schemes as they are built to cater to certain capacities. As a result, illegal connections put pressure on the infrastructure, which will, in turn, affect water provision in some communities. Most of the existing water schemes were designed depending on the areas' setup, and now because of illegal connections, they cannot meet the demand and pressure, which poses a challenge.

5.3.2 Understanding of The Critical Importance of Water

The study established that communities still lack a clear understanding of the critical importance of water and the implications of their actions on access to water services, especially for other communities. This can be attributed to the high levels of illegal connections, vandalism, and theft of infrastructures in their communities. The need for community education on the disparities in access to water and that water is a scarce resource that is costly and should be protected and preserved to ensure sustainability was raised.

The communities still lack an understanding of how critical the issue of water is. The level of theft, vandalism, and illegal connections shows a need for more education to understand that people suffer from their actions [focus group participant].

Officials questioned further highlighted that these actions impact water availability and have financial ramifications for the Water Service Authorities, which is a burden in and of itself.

A lot of revenue is lost through leakages due to vandalised infrastructure and illegally connected water. More so, people do not have an incentive to save water as it is illegally connected. To the community, water lost belongs to the municipality, not to them, yet this is a misconception they do not understand [official].

Communities have a critical role in water governance, specifically in addressing the issue of social inequities. Failure by municipalities to fulfil their tasks and responsibilities, such as failing to protect their infrastructure and water sources, would always exacerbate disparities in the supply of water services. Therefore, communities must be fully empowered and understand the implications of their actions on access to water services by the next person. Through community education, empowerment and education, water developments can achieve equitable access to water services.

5.4 Economic Factors

5.4.1 Infrastructural Challenges

Study findings affirmed that infrastructural factors are at the core of water service delivery and highly affect the distribution and access to water services. The finding is consistent with Romano & Akhmouch's assertion that obsolete, and lack of infrastructure presents the main challenge of future water management (Romano and Akhmouch's, 2019). Findings revealed that the District Municipality is presently functioning with worn, old, and poorly maintained infrastructure, resulting in unreliable, unsafe, insufficient, and unequal access to water services. Like other municipalities in South Africa, the municipality's infrastructure is dilapidated, old, and poorly maintained and operated. As a result, this negatively affects water service provision in terms of quality, quantity, and reliability, particularly to those communities that have been disadvantaged.

The state of infrastructure in water provision requires huge investment in operation and maintenance if sustainability is to be ensured, and yet the municipality is facing huge challenges in the operation and maintenance of its infrastructure. Furthermore, Chatiza in Maramura confirmed how infrastructural resuscitation and maintenance are critical factors in

determining the success of public service providers in ensuring the accessibility and availability of water services (Chatiza, 2016; Maramura, 2018;). The study also revealed that the municipality is underpinned by constant bursts and leaking pipes that are not repaired in time resulting in poor service delivery and lack of access to water services, especially in vulnerable groups which rely on municipal water.

I don't remember the last time I had my budget for operation and maintenance, and it's a shame that one of the communities I oversee could not have water for more than two weeks because the tap could not be fixed as there was no money. Our O & M is at 2% against the National Standard set at 8% [official].

The finding aligns with the Auditor General's [South Africa] findings, which revealed many infrastructure construction and maintenance flaws. For instance, budget underspending, project delays, non-compliance with supply chain management rules, and irregular expenditure were all seen in infrastructure development projects (Auditor-General South Africa (AGSA), 2020:23). The Auditor-General [South Africa] (2020) further noted that the main concern was the lack of attention to water services infrastructure, water, and sanitation within South African municipalities.

Furthermore, the municipality's infrastructure is highly challenged by high vandalism and cable theft cases. Resultantly, this has led to the loss of water which is already considered a scarce resource due to leakages. Since this water is not metered, such a scenario also suggests a lack of revenue, which has financial ramifications for the municipality. The finding was also noted by the Auditor-General's South Africa report, which indicated that 36% of the water institutions disclosed water losses more than 30%, and the overall water losses disclosed amounted to R6.56billion (Auditor-General [South Africa] (AGSA), 2020). Meanwhile, Adom and Simatele also noted that about a quarter billion of non-billed water is lost annually through leakages due to burst pipes and collapsing infrastructure (Adom and Simatele, 2021).

On my desk right now is the fourth report on the incidences of cable theft in the same area in two weeks, and without that cable, the entire area will be without water. The saddest thing is there is nothing much I can do as the municipality is financially stranded and it is even difficult to get money for operation and maintenance [official].

Study findings further revealed that the municipality has insufficient trucks to service all areas, the absence of generators (to ensure the reliability of water during load shedding and electrical faults), and limited water sources (affecting water storage, especially during drought).

Taps and tanks in my ward are not enough. Moreover, there are only three or four water carting trucks in the whole municipality, yet twenty-three wards need to be served. So, one truck must serve more than six wards [Councillor.

The District Municipality has limited water sources and reservoirs to meet its current demand, so even if we fill its current reservoirs, the water might not be enough to meet its current needs. However, we are hoping that the dams constructed will assist [Water Board Representative].

This finding is consistent with Romano and Akhmouch's observation that the water sector is highly capital-intensive and requires huge investments for infrastructure and development (Romano and Akhmouch's, 2019). Furthermore, they indicated that aging infrastructure negatively impacts efficiency and increases operating costs due to leakages.

5.4.2 Municipal Financing: Insufficient Revenues

One of the major misconceptions about the Human Rights-Based Approach is that water right entitles people to free water. However, the truth is that water services must be affordable to everybody, and citizens must contribute as required by law (Maramura, 2018). Human Rights-Based Approach (HRBA) misconceptions coupled with customer dissatisfaction and lack of value for money have resulted in communities avoiding payments for water services. Such a scenario has had detrimental effects on municipal revenues and service provision as providing water services entails huge costs. Study findings revealed that the municipality has a poor revenue base and is grant dependent resulting in limited financial capacity to realise the human right to water and achieve equitable water governance. Sixty-five percent of the officials interviewed indicated that the municipality lacks the financial capacity to carry out sustainable and equitable water provision.

Various legislations in South Africa provide for municipal financings, such as Section 229 of the Constitution (1996), which assigns the authority to raise its revenue through property rates and surcharges for services delivered. Municipalities should therefore ensure clients are billed; it has collected all the money owed to them, and that credit management and debt collection policy are adopted, maintained, and implemented. Even though the legislation provides for municipalities to collect their revenue, the study revealed that the municipality fails to collect its revenue with a collection rate way below the national standard

Our average collection rate is 27% against the National standard, which is 95%. Its collection rate is poor, the communities are not paying, and even some of our major stakeholders and big businesses are not paying their bills, affecting the municipal finances. Most of our communities are indigent, and they don't come to register their status in some cases. So, as a result, they are billed, and when it comes to paying, they will not pay because they don't afford it [official].

This finding is consistent with Oosthuizen & Thornhill's study, which asserted that the ability of municipalities to raise revenue differs radically across municipalities, and this affects their ability to perform the functions allocated to them (Oosthuizen and Thornhill's, 2017). In addition, the UN-Water argued that one of the main challenges in achieving equitable water governance is attributed to affordability challenges (UN-Water, 2019). The assertions of UN-Water back up the findings of the Amathole District Municipality, which found that most users do not pay for water (UN-Water, 2019). Therefore, to address the affordability concerns and redress the disparities in water provision, the Division of Revenue Act (DORA) allows municipalities to be given part of the nationally raised revenue to supplement their revenues and achieve their developmental duties.

In this regard, the study revealed that the municipality received the Equitable Share Grant (non-conditional) from the national government, and in turn, this has provided Free Basic Water Services to those who do not afford them. However, indications were made that the grant received was not enough to realise the human right to water, as indicated in the following excerpts below:

We receive Equitable Share, and we have to provide water services to those who would have registered as indigent". The equitable share is not enough, salaries consume 80% of it, and the remaining 20% is not enough to cater for all operations and maintenance[official].

Furthermore, officials highlighted that the municipality is grant-dependent. However, these grants come with stringent requirements, and as a result, funds are underutilised. This affirmed Oosthuizen & Thornhill's findings, which observed that poor municipalities heavily rely on national transfers due to a significantly lower tax base than larger cities (Oosthuizen and Thornhill's, 2017). The study revealed that Amathole District Municipality had become a grant-dependent municipality failing to raise its revenue. Officials further attributed poor revenue collection to shared communal standpipes, making billing a challenge, illegal connections, and leakages.

It is difficult for the municipality to bill water and control access because of shared communal standpipes. As a result, people use more than the minimum standards with the extra levels not being billed. At the same time, the municipality also loses a lot of revenue through leakages and illegal connections [official].

Insufficient revenue through poor collection rates and limited funding creates a financial imbalance within the Water Service Authorities, which has detrimental effects on service provision. The study also revealed that while grants provided by the national government were meant to address the financial shortcomings in municipalities, support the strategic priority of the government, eradicate service delivery backlogs, and contribute to local economic development, empirical evidence showed that they are not enough and the aims are far from being achieved (Oosthuizen and Thornhill, 2017). Insufficient funding has impacted the municipality's capacity to explore other sustainable strategies such as sea desalination and stormwater harvesting, largely owed to the municipality's lack of financial capacity. Ensuring reliable, equitable, and sustainable water provision in those areas that lack access remains a challenge. Therefore, such a scenario affects decision-making and the level of access and infrastructural development within the district.

5.4.3 Financial Mismanagement

The management of municipal finances emerged as another theme affecting the level of service provision in the municipality with participants highlighting poor utilisation of funds as a major concern. The study finding was consistent with Auditor General reports which reflected fruitless and wasteful expenditure. Furthermore, the Auditor-General [South Africa] report for the municipality in the years (2017-2019) has been disappointing, with the previous year (2019/2020) obtaining a disclaimer audit report (Municipal Money, 2020). The challenges in

municipal financial management were noted by Sutcliffe & Bannister, who highlighted that while some achievements have been made in South African local government, the sphere is still far from being a responsible and responsive institution, and the Medium Term Strategic Framework (MTSF) (2014-2019) observations that corruption and maladministration had become deeply entrenched in some municipalities, and this has been promoted by a lack of accountability and transparency in service delivery (Sutcliffe & Bannister, 2020). The finding was also confirmed with the focus group discussions.

The municipality is concentrating on unfunded mandates that do not help us achieve our primary goal, which is to provide water, and yet it is failing to collect revenue, and this has affected our ability to pay our creditors on time and the completion of a project[official].

In his report on local government, the Auditor-General [South Africa] (2020) stated that municipalities are failing to present quality financial reports even though they are crucial in ensuring accountability and transparency (Auditor-General South Africa (AGSA), 2020). This finding is not a unique phenomenon in the District Municipality but rather a reflection of the situation of most South African municipalities as highlighted by the Auditor General's findings. The finding is also consistent with the back-to-basic approach that emphasises addressing corruption, poor engagement with communities, poor financial management, and negative audit outcomes in the local government (Oosthuizen and Thornhill, 2017; Rawl's, 1971).

Conclusions

The study revealed that the above-mentioned factors have detrimental impacts on basic water service provision, and consequently, they have widened the gap between the "haves" and the "have-nots". Furthermore, these factors impede the realisation of the human right to water and present a barrier to the achievement of the Sustainable Development Goals (Goal No 6), which also directly or indirectly affect the realisation of other rights such as the right to education, life, and health (as reflected during the COVID 19 pandemic). Unfortunately, the study also revealed that it is the vulnerable and the poor and, in most cases, those residing in rural areas who are affected the most due to a lack of capacity to find alternative measures to access safe, sufficient, and reliable water services. As such, there is a need for South Africa to focus and push for the development of social policies focused on addressing the needs of the poor and vulnerable groups through a sense of shared responsibility amongst the three spheres of government, civil society, and the private sector and along sided policymakers to achieve societal, economic and environmental benefits of effective water governance.

Secondly, while the study managed to achieve the main research objective of examining factors affecting water governance and social equity in rural municipalities, the study also revealed that these factors are highly intertwined, and failure in one area implies a failure in water governance as a whole. For instance, addressing infrastructural challenges implies huge financial investments while attracting the right skills depends on how favourable the remuneration is, especially in rural municipalities. Furthermore, the financial capacity of a municipality highly determines its ability to adapt to the ever-changing environment and its resilience in terms of environmental and economic hardships. The conclusion aligns with Rawls' works and the Human Rights Based Approach, which indicates a need for a sense of shared responsibility in dealing with public service provision to ensure that social equity is reached. The diversity and interdependence of identified factors reflect the need for various sectors such as civil society, the public, and private sectors, and other interest groups to work together through an integrated approach if South African rural municipalities are to successfully address water challenges.

Thirdly, an important aspect revealed by this study is that while water challenges are context-specific and place-based, these challenges are inherently complex and strongly linked to the critical domains for developmental needs such as health, and poverty alleviation in South African rural municipalities and their communities. Therefore, ensuring social equity in water service provision calls for the need to understand the underlying factors in each context and tailor specific strategies if this looming problem of inequity is to be addressed. Lastly, with the incorporation of the Human Rights-Based Approach and the Theory of Justice, South African municipalities might stand a chance to address the governance crisis, an issue raised in both the literature and the findings. This aspect is critical in South African water governance, which had been deeply entrenched with the legacy of colonial and apartheid racial discrimination policy regimes, which justified the racial deprivation of the black majority to equal access to equitable public service provision as well as the development in their communities.

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