

LONG-TERM ALTERNATIVE STRATEGIES FOR IMPLEMENTATION IN WATER-STRESSED INFORMAL SETTLEMENTS DURING COVID-19: A CASE STUDY OF SKITI IN BUTTERWORTH (BUTTERWORTH) MNQUMA LOCAL MUNICIPALITY

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ABSTRACT

This study seeks to improve water service provision in informal settlements and ensuring universal access to water by implementing sustainable strategies. South Africa has proposed several policies to alleviate water scarcity in informal settlements to ensure that individuals receive potable water. However, water provision challenges are underpinning the Amathole District Municipality, and water provision in Mquma Local Municipality has been unsatisfactory, particularly in informal settlements, even before Covid-19. Interviews, focus groups were employed to collect data and thematic analysis was adopted to analyse the data. The study purposefully selected a sample from Skiti informal settlement in Butterworth, an area that is currently facing water challenges. A sample of fifteen (=15) participants were used for this study. Ten are community members and the remaining five are officials from Mquma Local Municipality. The study provided the findings and recommendations to help Mquma Local Municipality to improve water service provision in informal settlements.

Keywords: Informal Settlement, Skiti in (Butterworth) Mquma Local Municipality, Sustainable Strategies, Water-Deficiency.

INTRODUCTION

The Mquma Local Municipality is a Category B municipality in the Eastern Cape Province's south-eastern region. According to Bota (2013), it is under the jurisdiction of the Amathole District Municipality and includes the former Butterworth, Ngqamakhwe, and Centane Transitional Regional Councils. While the main cities and towns of Mquma Local Municipality are Centane and Ngqamakhwe, it also has informal settlements such as Skiti in Butterworth (Bota, 2013). Because of their informal or illegal status, these areas have experienced a variety of water shortages. Developing nations like South Africa continue to struggle with historically ingrained legacies in their citizens' access to clean water and sanitary facilities. Some communities have been unable to get these fundamental water services as a result. This has also been listed as one of the most unequal societies in the world (Ramcharan-Kotze, 2020). The COVID 19 pandemic has brought South Africa's inequality and water shortage issues to light, particularly in informal settlements, among the poor, and among vulnerable populations. These challenges of access to safe drinking water in informal settlements can be further reflected in Mquma Local municipality, especially in Skiti settlement. More troublingly, South Africa's water issue has also gotten out of hand, with

water shortages being blamed on, among other things, droughts, climate change, and surface runoff (Enqvist & Ziervogel, 2019). Rakodi, (2016), who claimed that climate change should be at the forefront of discussion, also made note of this. Due to the harmful effects on water supplies such dams and rivers, there is a water crisis and shortage in South Africa. Understanding that water is a necessary for existence and that "Water is life" (Nazarko, 2018) means that it should be emphasized as a human right is critical.

According to World Health Organization (WHO) statistics from 2017 and Olagunju et al., 2019, 2.1 billion people worldwide do not have access to clean, safe water, and 4.5 billion do not have access to sanitation, highlighting the dire situation. In light of the catastrophic circumstances surrounding access to water services, international declarations were passed to ensure that everyone has access to the fundamental human right to water. Among these declarations are the Human Rights Council Resolution (2010), the Millennium Development Goals (MDGs) (2015), and the current Sustainable Development Goals (SDGs) (2030). Different countries are working together to ensure that these objectives are met (Wooldridge & Bilharz, 2017).

In accordance with Section 27(1) of the 1996-adopted South African Constitution, everyone has the right to get enough water. Section 27(2) mandates that the state use its resources to carry out appropriate legislative and other actions that will eventually establish these rights. The National Water Act (Act No. 36 of 1998), the Water Service Act (Act No. 107 of 1997), and Local Government Acts such as the Municipal Structures Act (Act No. 117 of 1998), its amendment (Act No. 117 of 2000), and the Local Government Municipal Systems Act (Act No. 32 of 2000), among others, were passed in order to ensure that water rights are realized. However, those who reside in the Skiti region continue to endure a setting that is neither safe nor healthy, especially during the COVID 19 pandemic, is one where people live in unfavorable conditions with untreated sewage streaming through their streets and homes (Dingana, 2012).

This paper's goal is to shed light on the current situation in the unincorporated village of Skiti and to demonstrate the need for more robust alternatives to the methods being employed to deal with the water constraints. In the water-scarce informal settlements of the Mngquma local municipality, the article offers recommendations for implementing sustainable alternatives. These recommendations will aid municipalities in ensuring that they have upheld their constitutional and developmental duties to guarantee that their citizens, particularly those living in informal settlements, have access to enough water. The study will, however, broaden community access to water services, which is essential in light of the COVID 19 pandemic in especially.

The Significance of Clean Water Access In South Africa

In the management and control of water, the adage "water is life" and "sanitation is dignity" (United Nations, 2019) cannot be discounted; yet, the truth that water is one of the world's most urgent needs also carries the same weight (Thieme, 2018). It is also true that, despite being one of the most important fundamental services, access to water services is still restricted in South Africa and all across the world. The United Nations (2019) research also indicates that the situation is worse for people live in informal settlements. Statistics show that women and children are among the most vulnerable populations affected by this water crisis. The situation has been further worsened and exposed by the global pandemic of COVID 19 where hygiene is the key to combat the virus. Having access to water services is therefore important in reducing psychological stress in the overcrowded informal settlements and will enable those residing in those areas to pursue their skills, save time and be valuable

to the economy (United Nations ,2019). The right to access water services, which is an interdependent right, will most critically guarantee the fulfillment of other rights, such as the right to better health, the right to life through a decline in diseases and death rates, and the right to education (United Nations, 2019:43). Which school will be prioritized over skipping class to gather water? It is crucial that people have access to clean water in this regard, especially in South Africa's informal settlements. This is also reflected in SDG 2030, which places a strong emphasis on having access to adequate, sustainable, and fair water services. In order to ensure the realization of the right of access, it is crucial that the Water Service Authorities in South Africa prioritize and encourage growth in informal settlements.

A sizeable population was excluded for using these fundamental services because of the apartheid regime's association of providing water and other basic public services in South Africa with prejudice and discrimination (De Coning ,2006; Muzondi, 2014). In 1994 and 2008, when democracy first emerged, the government declared the Universal Water Supply Declaration. The proclamation attempted to guarantee that all residents had equal access to water supplies. Although South Africa implemented a number of laws, including the National Water Act (Act No. 108 of 1997) and the Water Service Act (Act No. 36 of 1997), access to the water supply is still a problem. Despite the fact that the nation is thought to be water-scarce, a fundamental prerequisite was put at 25 liters per person per day for drinking washing and cooking (Camkin & Neto, 2016). However, in informal settlements, these minimum standards are hardly ever met (Muzondi, 2014). Water resources are limited as a result of urban regions' increasing urbanization and population increase. A Muzondi (2014) survey found that 1.2 million families in 2700 informal communities lacked access to necessary basic amenities, particularly water supply (Muzondi, 2014:105). Evidence thus demonstrates that although the residents have a legal right to adequate water services, these standards are not being met in practice, and as a result, the supply of water in these slums is consistently inconsistent in both quality and quantity. Thus, having more environmentally friendly water supply systems in South Africa is crucial. In this regard, it is therefore important to have more sustainable water supply systems in South Africa, especially in informal settlements such as Skiti.

Water and Sanitation are Human Rights

According to Thieme (2018), "water is life" and "sanitation is dignity." This common phrase has gained currency in water policy debates, particularly those concerning basic water supply. Water supply is now considered a basic human right due to its profound impact on human survival (Borja-Vega & Kloeve, 2018). According to Power (2013), the theoretical underpinnings of the concept were influenced by many philosophers such as Abraham Maslow's Hierarchy of basic needs, in which water is one of the basic needs that one requires for survival. More so, the theories of social justice advocates for equity and justice in public service provision that is ensuring that everyone is recognised (Keysa et al., 2014). (Keysa et al., 2014). Furthermore, Keysa et al., (2014) argued that human rights are a normative framework for fostering social justice through public policies and lay down legal provisions to make water and sanitation more available to all while Power (2019) went on to argue that social structural theories support the human right based approaches as they stress the need for effective public organisations, which preserve the values of equal access to sufficient clean water, sanitation and other important uses for present and future generations (Power, 2013). Furthermore, the Human Rights Based Approach considers basic water supply, as well as other public services, to be human rights that should be provided to everyone. "In terms of international law, the basic water supply was recognized as a human right through the Human

Right Resolution (2010) adopted by the United General Assembly in 2010" (United Nations, 2019:35), which declared water and sanitation to be human rights that should be adequately and sufficiently provided (Neves-Silva & Heller 2016). While water has been declared a human right, global statistics show that approximately 2.1 billion people still lack access to safe, ready, and available water in their homes, while an estimated 4.5 billion people lack access to safely managed sanitation (United Nations, 2019). Children, women, the poor and vulnerable, and those living in informal settlements and slums are among the most vulnerable groups affected by water scarcity. The World Health Organization (WHO, 2012) added that, while progress has been made, the lack of concerted action and effect among the vulnerable has contributed to a continued lack of access to water and sanitation services in developing countries over the last few decades. Recognizing these challenges, water and sanitation were included in the major international conventions, which are the MDGs (2015) and the current SDGs (2030).

The Sustainable Development Goals and Water Supply (2030)

The Sustainable Development Goal (SDG) 2030 No. 6 aims to provide equitable water service provision for all, with women, children, the poor, the excluded, and those residing in slums or informal settlements being among the most targeted demographics (United Nation, 2019). These populations are the most affected and will suffer the most, despite the fact that the aforementioned worldwide figures show that a sizeable population is already and will continue to be afflicted by water stress and lack of access to water supplies. Additionally, it is believed that the SDGs relating to water are at the core of all sustainable development. This is due to the fact that the right to water and sanitation is inextricably related to other human rights including education, health, and safety (Brown et al., 2016; UN, 2018). Additionally, it is believed that failing to secure the fulfillment of the human right to water and sanitation will have negative effects on both society as a whole and on an individual level. Lack of access to water has several negative repercussions, including violence, social instability, human migration and displacement, a lack of educational chances, and a lack of job opportunities (United Nations, 2019:35). The 2030 Agenda on sustainable development, therefore, aims at leaving no one behind that is ensuring water service provision without discrimination in terms of location for example informal settlements or slum dwellers, income, political status among other factors. In this regard, this study, therefore, focuses on water deficiency particularly in informal settlements, a group identified by the UN as one of the major groups which are left behind in accessing water and sanitation.

Informal Settlements

Informal settlement(s) are among the major targeted areas by the SDGs especially those related to water and sanitation. Access to basic public services is limited and, in most cases, these informal settlements are neglected hence they lack access to these basic services (Hedden, 2016). According to global statistics, about a quarter of the urban population is residing in informal settlements and lack access to basic services (UN,2018; Muzondi, 2014) while 60% of those residing in cities in Sub Saharan Africa resides in slums (Un-Habitat, 2016). More so, those living in informal settlements face, among other obstacles, insufficient accommodation, lack of access to or maintenance of basic services and the possibility of eviction (Socio-Economic Rights Institute of South Africa (SERI) ,2018). Informality, which is characterized by poor living conditions and social and economic exclusion, is in fact a critical problem in the informal settlements Hara et al., (2020). The development of informal

settlements (squatter camps and slums) has been attributed to several factors including population development and rural-urban migration, the absence of urban deprived housing, bad governmental management, specifically policy planning, land and urban speculation, insecurity and underpayment, conflict-led separation and marginalization (UN-Habitat, 2015; Jones, 2017). Furthermore, Marutlulle & Ijeoma (2015) added that administrative uncertainty, institutional change and the absence of unified policy have allowed informal settlers to step forward and grow slums rapidly, thus making it possible for informal settlements to flourish Marutlulle, (2017). On the other hand, Jones (2017) attributes the growth of informal settlements as a response to poor state policies and the incapacity of institutions to meet the basic rights and human needs which include the right to adequate housing with the formal market (Jones, 2017:6).

Human Right Based-Approach (HRBA) The study is based on the Human Rights-Based Approach. The theory can be traced back from the works of Thomas Hobbes, a philosopher who believed that all citizens should have equal rights and should be able to access them and the works of Aristotle who argued that the constitution must fully respect and protect the rights of all citizens (Miller,1996). “The HRBA can be defined as the conscious and systematic enhancement of human rights in all aspects of project and program development and implementation” (UNICEF,2015). In simple terms, human rights are specified as the minimum demands for justice. These are the main claims or rights that all people have against the main organized society institutions (Power, 2013). Being one of the most influential theories in the water policy, the HRBA has been widely recognised. It has been a powerful tool in influencing international declarations such as the Dublin Principles (1992), the MDGs (2015) and the current SDGs (2030) (World Meteorological Organization, 1992 & Power,2013). Most importantly, the Human Rights Declaration of 2010 in which clean and safe water and sanitation were declared by the United Nations had a powerful influence on the theory concerning water services. While the approach has been internationally recognised, states have also incorporated human rights into their constitutions for instance the Constitution of South Africa 108 of 1996 (Chapter 2: Bill of rights) Section 27 which put access to sufficient water as human rights. The human rights-based approach, therefore, provides a solid basis for this study. It is a powerful tool in influencing policy decisions and programmes that can be implemented by the local and national government to ensure that everyone has access to safe and clean drinking water especially during the COVID 19 crisis where water is crucial. The human rights-based approach advocates for access to water for all without discrimination. As an international agreement and a constitutional mandate, the human rights-based approach, therefore, mandates the state to make sure that those residing in informal settlements such as Skiti in Mnquma Local Municipality to be provided with sufficient, safe, clean and affordable water. It is therefore important that the human rights to water are met as they are dependent on the fulfilment of other rights such as the right to freedom, education, health and a safe environment, among others. This was further noted by Right (2002) who argued that “The human right to water is indispensable for leading a life in human dignity”. While the HRBA has been widely recognised, it has been criticised by scholars such as Brown (1997) who argued that rights are regarded as fundamentally individualizing and they are neglecting economic injustices. He argued that they allow a continuous breach of individuals' core personal integrity and building. Although this might be the case, the influence and critical role played by the human rights based approach in water policy cannot be undermined. It enables those who are marginalised especially those residing in informal settlements to be recognised and to have access to water services Brown-Luthango (2017). Also, the approach is critical in this study as it does not argue that water should be for free but urges the state as duty bearers to come

up with solutions to ensure that water is accessed by everyone. Such solutions include alternative strategies for implementation in Skiti informal settlement to improve access to water services.

Water Management Techniques for Informal Settlements

It is impossible to ignore the difficulties in providing water services and the lack of water in slum areas. Due to waiting in lines, traveling great distances to get water, and health dangers like COVID 19, women, children, and families are being deprived of their right to water as well as other rights including the right to education, health, and life. The importance of long-term alternatives cannot be overstated in this regard. The supply of sustainable water services necessitates appropriate planning techniques and approaches, therefore many aspects should be taken into account as they would affect the provision of water services in informal settlements like Skiti informal settlement. Therefore, the following tactics can be used to guarantee increased access to water services in the Skiti informal settlement.

Less Contaminants and Higher Water Quality

The quality of the water is one of the key issues with water supply in the Skiti community. According to numerous studies, the majority of water sources are unfit for human consumption, including some municipally provided water (Shezi, 2017). However, the situation is really bad in slum areas where the sewage and waste systems are barely maintained (Mukheibir & Sparks, 2003). Therefore, the strategy of lowering water contamination and raising water quality can enhance the availability of water in these places. To ensure that the limited amount of available water is safe for use, this can be accomplished by safeguarding water sources, such as by having closed wells and tankers.

Saving Water and Lowering Demand

According to Schulze and Perks (2000), one of the main reasons for a lack of access to water supply in South Africa is water scarcity. Furthermore, as a water-scarce country, it has experienced persistent droughts, resulting in a decrease in water reserves as dams and rivers have dried up. The rapid growth of the population, particularly in urban areas, as well as the rapid growth of informal settlements, has put additional strain on the water supply (Shezi, 2017:26). Reducing water demand and encouraging water conservation in Skiti will result in a more sustainable and increased water supply. This could be accomplished through a variety of means, including voluntary compliance, water conservation awareness and educational campaigns, legal restrictions on water and pricing policies, and water rationing through certain technologies.

Public-Private Partnerships: (PPP)

According to Muzondi (2014), PPPs are the best option for ensuring water supply in informal settlements. Muzondi contended that, while publicly owned and operated entities may have citizens' best interests at heart and a constitutional and legal mandate to provide water in these areas, these entities are inefficient in most cases and require a strong economic base to sustain services. Privately owned entities, on the other hand, seek to maximize profits, and as a result, the poor who live in these informal settlements suffer. PPPs, as the best option, provide a balance that will result in the economic and social sustainability of water supply.

Sustainable Water Resource Management

One of the strategies that will lead to more sustainable water service provision in Skiti is water resource management. It seeks to strike a balance between equity, efficiency, and the environment, resulting in the fulfillment of both economic and social values. The principle of equity in water management implies justice and fairness, which means that informal settlements must be recognized in broad national policies. De Carvalho, Carden, and Armitage (2009) go on to advocate for Sustainable Integrated Water Resource Management, which strengthens IWRM by promoting the sustainability of water management, particularly in urban areas (Muzondi, 2014:106).

Slum Improvement

Slum upgrading is one of the fundamental strategies that will lead to development and long-term water supply (Jones, 2017:2). The strategy, according to Muzondi (2014), calls for seven interventions, including "connections to a water supply for individual households; construction of underground sewage for individual households; installation of storm water drainage; provision of street lighting; stone paving of internal and approach roads; solid waste management; and delivery of toilets for individual households" (2014:106). One important aspect of this strategy is that it addresses challenges in informal settlements such as Skiti in a more sustainable manner RIGHTS, (2002).

METHODOLOGY

The interpretivism world view was used to guide this paper's qualitative research methodology. This methodology is based on the premise that people use "what they see, hear, and feel" to make sense of social interactions and focuses on non-numerical data collection and work (Liamputtong, 2019). According to Moore (2016), the knowledge gained from qualitative research methodology is the result of more in-depth techniques and problems to be solved. "Qualitative research seeks to comprehend phenomena through observation, in-depth interviews, analytical documentation, and focus groups" (Eisner,2017). The researchers sought to interact with the municipal manager and other participants in order to learn about their perspectives and experiences with water scarcity in Mnquma Local Municipality, specifically in the Skiti informal settlement. As a result, a qualitative research methodology provides a better understanding of the local realities. The paper purposefully chose a sample from the Skiti informal settlement in Butterworth, which is currently experiencing water shortages. A sample of fifteen (n=15) participants were chosen for this study. From the 15 participants, ten (n=10) were community members from Skiti informal settlement in Mnquma Local Municipality, five (n=5) were officials (municipal manager (1), representatives from water services portfolio head (2), (1) ward councillor (1), and a representative from Department of Water and Sanitation from Mnquma Local Municipality. The reason for selecting municipal officials in different sectors of the municipality was because they are familiar with the phenomenon under study and will be able to provide useful knowledge to answer the research question.

Findings

This section provides the findings from the interviews and focus group discussion carried out.

Educational and Awareness Campaigns in Skiti

The paper established that one of the interventions carried out in MLM was educational campaigns on the importance of water. Community and educational campaigns are thus among the interventions implemented in the Skiti informal settlement in Mquma Local Municipality. This was also noted in the (Amathole District Municipality Water Service Development Plan (WSDP) 2017-2022: 9) in which the ADM as the Water Service Authority (WSA) indicated that vandalism and leakages contributed to the district's 40 percent water loss and that community and educational campaigns are part of the interventions implemented to address this. The municipal manager of Mquma Local Municipality responded that there is coordination and cooperation between the district and local municipalities to ensure the flow of service delivery. More so, the issue of vandalism raised in Skiti informal settlement can be supported by Sinharoy, et al. (2019); the study argued that social factors for instance community actions affect policy implementation and service delivery of water and sanitation in informal settlements.

Alternative Water Strategies for Skiti

According to the responses, water tanks and boreholes were used as interventions to improve water supply in Skiti informal settlements, particularly during the drought and COVID-19 pandemic. Skiti is an informal settlement located near a dam, and non-permanent measures to water provision in the area were supplied, such as tanks to support the communal taps during the COVID-19 pandemic, according to 91 percent of community respondents. Boreholes were drilled, and they supplied residents with water during the severe drought and the COVID-19 pandemic, according to 71% of officials. While the officials highlighted these interventions, it was noted that the interventions in Skiti informal settlement were not enough to ensure sufficient water as required by Section 27 of the 1996 Constitution of South Africa nor the minimum standards as prescribed by World Health Organisation of 50 liters per day per person.

Infrastructural Development in Skiti

According to the 65% of officials interviewed, infrastructural development was among the interventions in progress to ensure water is supplied to Skiti Informal settlement. The responses also indicated that the water purification plant for the project is already in place with only the reservoir and pump station being left. While the project seems to be promising, the officials highlighted that the project is meant to serve all the rural areas of Nqgamakhe, and it is projected that water will also be supplied in Butterworth. However, the researcher's concerns remain on whether the project will also include the informal settlements in Mquma Local Municipality. Whether it is certain that Skiti informal settlement will get its fair share when water is supplied in Butterworth as it is an informal settlement is still a question to be answered when the project is finished.

Community Vandalism

Among the causes of water scarcity in Skiti Informal settlement, vandalism emerged as a theme with the municipal manager and officials putting much emphasis on how it is

putting stress on the municipality. Vandalism leads to water loss and leakages as water will be left out running on the taps. These findings can be supported by ADM's 2017-2022 WSDP which indicated that about 40% of the municipal water is lost and vandalism is among the main reasons. Also, these findings can be supported by Mudombi (2020) who argued that communities are protesting as a way to be heard by the responsible authorities and among the main issue was the issue of water. It can then be deduced that vandalism in Skiti may be related to service delivery protests to force the responsible authorities to act and ensure that their constitutional right to sufficient water and sanitation are met.

Challenges Faced in Accessing Water in Skiti Informal Settlement

The 95% respondents on focus groups indicated that while intervention and strategies may be implemented, Skiti informal settlement is faced with various challenges which include lack of infrastructure for instance they have to work with three shared taps, lack of political will to supply water by the councillor, poor maintenance of infrastructure leading to water leakages and the exclusion of the informal settlement in the municipality planning because of its status as an informal settlement as participants noted.

CONCLUSION

The provision of services as a basic right of citizens remains the core business of government, and satisfying citizens requires efficiency and effectiveness. The current government has transformed the public service from a racially based one to an all-inclusive one through the passage of legislation that promotes equity and fair treatment of all citizens. Although certain services have improved, the research findings show that the improvement has been minimal in a number of municipalities that have been and continue to be affected by water service delivery during covid-19 in Skiti informal settlements. It can be deduced that a couple of interventions have been made and these include the provision of water tanks to supplement the three communal standpipes and the drilling of boreholes to increase water supply. However, the findings also reveal that the interventions made in Mngquma Local municipality are not sustainable as reflected by the water tanks which are not being filled regularly and the boreholes which are supplying unsafe water for human consumption and as a result, there is unreliable water supply in Skiti Informal settlement.

Furthermore, negligence from the Skiti residents in handling the limited infrastructure and water supplied as indicated by the issue of vandalism and water that is lost through unclosed taps is contributing to reduction in water supply in 51 the area. Also, the findings reveal that corruption and maladministration, drought and the "informal status" of Skiti area also appear among the major contributions in the deceleration of water service provision in Skiti (Mngquma Local Municipality). From the above observations, the study can safely conclude that the right to water in terms of Section 27 of the 1996 Constitution of the Republic of South Africa is not being met in Skiti informal settlement in Mngquma Local Municipality because of the abovementioned reasons.

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