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Water Governance and Social Equity in South Africa: A case study of Amathole District Municipality

by

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Submitted in Fulfilment of the Requirements for the Degree of Master of Administration in the Faculty of Management and Commerce at the University of Fort Hare

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September, 2021

Declaration on Previous Submission

I, **Clarity Hutete** student number **201911952,** declare that this dissertation titled, *"Water Governance and Social Equity in South Africa: A case study of Amathole District Municipality",* submitted for the award of the Degree of Master of Administration in the Faculty of Management and Commerce at the University of Fort Hare, is my own work and has never been submitted for any other degree at this university or any other university.

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Dedication

This work is dedicated to my father, ***Isaac Hutete****, my mother,* ***Kathrine Chigora,*** *and my siblings,* ***Chiedza, Cadie and Chardlain Hutete****. I have set the pace for you.*

Acknowledgements

***Philippians 1:6**: And I am certain that God, who began the good work within you, will continue his work until it is finally finished on the day when Christ Jesus returns.*

***Philippians 4:13:** I can do all things through Christ who strengthens me.*

Thank you, Lord Almighty, for giving me the wisdom and strength to pull through this journey. You kept me in good health, and you provided when I was in need. You kept your word and were faithful that you would see it to the end whatever you start.

I also want to give special thanks to:

- **My supervisor Dr M.M Sibanda** who believed in me and helped me from the beginning of this journey until the end. Thank you, Doc, for your patience and effort.
- **My husband, Dr W.T Vambe** who always said, *"I will never draw diagrams for you, but I will teach you the skill so that you can be able to do it yourself".* Thank you for being a provider, a mentor, a husband, a friend and a discussion partner.
- **My father, Isaac Hutete** who taught me that a certificate is your first husband and that it will never let you down. Thank you, Dad, for being a dedicated father who would stop at nothing to ensure his children are educated.
- **My mother, Kathrine Chigora**, **my siblings, and friends**, for your motivation when things got rough and tough, and for the gossips, they helped me in refreshing and managing the stress.
- **To my seniors (Doctors)** in the Department of Public Administration, I would call anytime when I got stuck. Thank you.

I also want to acknowledge:

- The GMRDC awarding me financial support in the form of a supervisor linked bursary. This came in handy throughout the research journey.
- The Amathole District Municipality and its staff saying this thesis would have never been finished in time if it was not for you.

Abstract

South Africa has reformed its water governance to remedy the prominent disparities in water service provision that resulted from the legacy of apartheid. However, despite the new policy reforms and strategies adopted, inequities in water governance remain prevalent. Those residing in marginalised and poor rural areas are the most vulnerable and highly affected by this phenomenon. While this has been attributed to several factors, such as fragmentation of the water sector and lack of capacity, among other reasons, an analysis of the literature revealed that the absence of a water governance framework for social equity is highly prevalent in the context of Amathole District Municipality (ADM) where the research was conducted. Hence, the study's main objective was to develop a water governance framework for social equity that can be utilised to advise councils and policymakers on the attainment of social equity by water service providers at the local level. The study utilised the constructivist research philosophy by adopting a qualitative case study research design and an inductive research approach to address the research questions. Focus group discussions, semi-structured interviews, participant observations and document analysis were used to collect data. A total sample of thirty-four (n=34) participants was purposefully selected; twenty participants (n=20) participated in semi-structured interviews, while fourteen (n=14) participants were engaged through focus group discussions. Findings obtained from the thematic data analysis utilised revealed that while human rights principles and social equity values underpin South Africa's water reforms, Amathole District Municipality is yet to fully absorb these foundational concepts into its water governance. The study revealed that this is largely attributed to a lack of meaningful participation, limited transparency and accountability in the processes and procedures of the municipality. Results also revealed that persistent inequities still exist in Amathole District Municipality as reflected by the unequal distribution of water services, inconsistency in services provision, lack of transparency and established procedures to guarantee procedural fairness and limited impact on interventions specifically in rural areas. Furthermore, the study revealed that the municipality's efforts to address water inequities are highly undermined by various economic, environmental, socio-

economic, and institutional governance factors. Therefore, the study recommended a Water Governance Framework for Social Equity (WGFSE) and proffered recommendations to enhance social equity for Amathole District Municipality and other municipalities with similar contexts.

Keywords: Water governance, social equity, Theory of Justice, Human Rights-Based Approach, Water Governance Framework, Amathole District Municipality

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Abbreviations and Acronyms

ADM	Amathole District Municipality
AGSA	Auditor-General South Africa
CoGTA	Cooperative Governance and Traditional Affairs
DWAF	Department of Water and Forestry
DWS	Department of Water and Sanitation
FBS	Free Basic Service
IDP	Integrated Development Plan
IGR	Inter-Governmental Relations
IWRA	International Water Resource Association
IWRM	Integrated Water Resource Management
JMP	Joint Monitoring Programme
MDG	Millennium Developmental Goals
MIG	Municipal Infrastructure Grant
MSA	Municipal Systems Act
MTSF	Medium Term Strategic Framework
MuSSA	Municipal Service Strategic Assessment
NAPA	National Academy of Public Administration
NBI	National Business Initiative
NDP	National Development Plan
NHRI	National Human Rights Institutions
NGO	Non-Governmental Organisation
OECD	Organisation of Economic Co-operation and Development

PMG	Parliamentary Monitoring Group
RDP	Reconstruction Development Plan
RHIG	Rural Household Infrastructure Grant
SALGA	South African Local Government Association
SDG	Sustainable Development Goals
Stats SA	Statistics South Africa
UN	United Nations
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization
WRC	Water Research Commission
WSA	Water Service Act
WSA	Water Service Authority
WSDP	Water Service Development Plan
WSP	Water Service Provider

CHAPTER ONE: OVERVIEW OF THE STUDY

1.1 INTRODUCTION

Social equity has largely become a critical contemporary issue within the domain of public administration, as evidenced in its prioritisation across the global spectrum (Wooldridge and Bilharz, 2017; IvyPanda, 2019; Sumra, 2019). The origins of this concept can be traced back to the 1960s (Wooldridge and Bilharz, 2017; Sumra, 2019). As a seminal notion in public administration, social equity constitutes one of the three pillars of water governance accompanied by efficiency and sustainability (Peña and Peña, 2011; Koppen and Schreiner, 2014). Social equity has thus, become one of the major goals that both developing and developed countries are working towards in reframing existing water-related public policies. However, the notion has been defined and operationalised in a variety of ways. Thus, it remains ambiguous and difficult to realise. Thus, in its simplest terms, social equity refers to "the active commitment to fairness, justice, and equality in the formulation and implementation of public policy, distribution of public services, and management of all institutions serving the public directly or by contract" (Johnson and Svara, 2011:282).

On the same note, the requirement for equal access to water services has largely drawn us to the concept of water governance, an emergent subject that has gotten a lot of scholarly attention in the last fifteen years (Pahl-Wostl, 2017:2917). Surprisingly, knowledge on this evolving concept is still limited (Franks and Cleaver, 2007; Pahl-Wostl, 2017; Olagunju *et al.*, 2019), and thus far, there is still no agreed universal definition. Scholars such as Pahl-Wostl (2017), Ozerol *et al.,* (2018) and Olagunju *et al.,* (2019) indicate in their studies that there is still a small body of knowledge on water governance as a unifying concept, and this may be partly attributed to the incorporation of its elements in other concepts such as partnerships, rights, participation and Integrated Water Resource Management (IWRM) or the focus given to good governance principles (Franks and Cleaver, 2007:292). However, this study adopts the definition of water governance by the

Global Water Partnership (GWP). The notion is characterised and defined as "the range of political, social, economic and administrative systems that are in place to regulate development and management of water resources and provision of water services at different levels of society" (Pahl-Wostl, 2017:2917).

Thus, in encouraging greater consensus in the attainment of social equity in water governance, this research elaborates on the topics from the perspective of public administration, since different fields such as law, economics, geography and environmental science, engineering, and philosophy have their views (Peña and Peña, 2011; Olagunju *et al.*, 2019). In quintessence, the purpose of this study is to provide a water governance framework for social equity to assist those engaged in the provision of water at the local level. Utilising Rawl's (1971) works "Theory of Justice" and the Human Rights-Based Approach (HRBA), the study used Amathole District Municipality (ADM) as a case study.

1.2 BACKGROUND, CONTEXT AND JUSTIFICATION OF THE STUDY

For decades, social equity has grown exponentially as a development goal across the world. In terms of water governance, this goal has gained centre stage in the international arena and within the global context (Jimenez *et al.*, 2020:2). The dominance of social equity in water governance can be further reflected by its role in contributing to the adoption of international conventions such as the Human Rights Approach (2010) (to safe drinking water), the Millennium Development Goals (MDGs) (2015), and the Sustainable Developmental Goals (2030) with particular reference to SDG number 6 (water) (Peña and Peña, 2011; Wooldridge and Bilharz, 2017).

Apart from being one of the major development goals across the world, equitable water governance has also proven to have significant outcomes in economic growth, investments, poverty reduction, improving standards of living (especially for the marginalised), stabilising communities (United Nations, 2012; OECD, 2015a) and as a measure of economic development (IvyPanda, 2019). The positive outcomes of equitable access to water have been globally recognised through the strong message that "water is life and sanitation is dignity". Several countries have ratified

international treaties and are striving towards implementing them. Despite this acknowledgement, reality tends to show otherwise. Global statistics indicate that approximately 2.1 billion people across the globe lack access to clean and safe water, and around 4.5 billion people do not have access to proper sanitation (World Health Organisation, 2017; Olagunju *et al.*, 2019). The policy brief by International Water Resource Association (IWRA) (2019) further points out that a billion people around the world do not have access to essential basic water services, and this is due to unjust water service allocation instead of drought or physical limitations (Cooley *et al.*, 2013; International Water Resource Association, 2019). These figures do not only show the population being denied access to essential water services but also the injustices and inequality that exist throughout the world.

South Africa is one of the countries that has been reforming its water sector and remedying the social disparities created and left by the legacy of apartheid (Nastar and Ramasar, 2012; Van Koppen and Schreiner, 2014). It has adopted the Millennium Developmental Goals (MDGs) and the Sustainable Developmental Goals (SDGs) international conventions and has incorporated equitable distribution of water service in its National Development Plan (NDP), Vision 2030 (Sutherland *et al.,* 2015; Lehohla, 2017). Furthermore, South Africa reformed its water governance from a centralised and bureaucratic system (pre-1994) to a more progressive and inclusive governance system (Funke *et al.,* 2008:153). The principle of equity is firmly enshrined in its Constitution (South Africa [Republic], 1996; Van Koppen and Schreiner, 2014; Sutherland *et al.*, 2015). As a result, South Africa is committed to attaining social equity through fair water governance and redressing historical inequities (after 1994)(Funke *et al.,* 2008; Quinn, 2012; Herrfahrdt-Pähle, 2014; Shabangu and Madzivhandila, 2017). This transition has largely been guided by the Constitution of 1996 and the Reconstruction Development Programme (RDP) of 1994 (Nnadozie, 2011:339). Other enabling legislative frameworks such as the Water Service Act (Act No 108 of 1997) (which guides water service provision) and the Local Government: Municipal Structures Act (Act No 117 of 1998) were enacted, giving effect to the Constitution (1996). They were all meant to promote social equity in water governance and ensure that all South Africans have access to sufficient water services (Nastar and Ramasar, 2012; Herrfahrdt-Pähle, 2014).

To encompass distributive and procedural justice in its water governance, South Africa changed its structures and created new institutions meant to ensure a "just society", as suggested by the social theories of justice (Neal *et al.*, 2014:9). Municipalities became Water Service Authorities (South Africa [Republic], 1997; Van Koppen and Schreiner, 2014), with the support of the Department of Water and Sanitation (DWS) (leading through policy development, regulation, monitoring and evaluation) (Lehohla, 2017:12) and the national government (through the Municipal Infrastructure Grant (MIG), Equitable Share Grant (van Koppen and Schreiner, 2014; Lehohla, 2017) and free basic services). Although the Constitution, in terms of Part B Schedule 4, put water service provision as an issue of municipal competence (South Africa [Republic], 1996), not all municipalities are considered Water Service Authorities (WSA). Authorisation was granted to all metropolitan municipalities, while local and district municipalities had to share functions to avoid duplication and coordination problems (Ncube and Vacu, 2017:260). As a result, there are currently one hundred and sixty-nine (169) municipalities authorised to provide water services (Lehohla, 2017:12) directly or through Water Service Providers (WSP) (Lehohla, 2017; Ncube and Vacu, 2017). These provisions are made in terms of the Municipal Structures Act (Act No 117 of 1998), the subsequently amended Act (Act No 33 of 2000) and the Municipal Systems Act (Act No 32 of 2000).

Despite the significant improvements made in water service provision (access to water services above 85% as of 2017) (Parliamentary Monitoring Group, 2017; Lehohla, 2017:13) and the strong legislative framework which supports social equity in water governance by municipalities, as Water Service Authorities; inequities persist across and within the nine provinces (Koppen and Schreiner, 2014; Mudombi, 2020). These assertions can be further confirmed by the Department of Water Affairs and Forestry's (DWAF) data for 2017 and Stats SA (2015), which reported that 6.3 million households in South Africa did not have access to reliable water services, and 14.1 million people were still using sanitation facilities that were below the RDP standard (Adom and Simatele, 2021:505). Various challenges encountered in the dynamics of water governance by municipalities have slowed progress in achieving universal access to water and social equity, and it is the poor and marginalised that bear the biggest brunt (Lehohla, 2017; PMG, 2017; Stats South

Africa, 2018b; Maluleke, 2019) and more so in the advent of pandemics such as COVID 19. Financial challenges (AGSA, 2017, 2018, 2019), poorly maintained and ageing infrastructure, affordability concerns, poor governance (Lehohla, 2017:13), and poor project management and oversight (Parliamentary Monitoring Group (PMG), 2017) are amongst some of the challenges reportedly being faced by South African municipalities in their water governance dynamics that have painted negative consequences on the achievement of social equity. As a result, some communities are going without water for days, weeks and some, even for months. The severity of the situation has culminated in an increase in service delivery protests from 528 as of 2017 to 737 in 2018 (Mudombi, 2020:12). Such dissatisfaction is a reflection of a lack of confidence in municipalities by communities, and this is also an indication of the inequities that exist in the country. These observations can also be seen in the case of the Amathole District Municipality (ADM). Amathole District Municipality (ADM) is among the six district municipalities in the Eastern Cape Province confronted with problems mentioned above in relation to water governance and pledge to achieve social equity. The district municipality, which has been a Water Service Authority (WSA) since 2003, is struggling to achieve social equity among and within its six local municipalities. In its 2017-2022 Water Service Development Plan (WSDP), Amathole District Municipality stated that an "existing gap between the national standards and the actual service provided is high and the situation is likely to continue with rural areas being the most vulnerable" (Amathole District Municipality, 2017:6). While the municipality's report from the 2016 Community Survey indicates that about seventy-four percent (74%) of the Amathole District Municipality community has access to clean and safe drinking water (Statistics South Africa, 2018:51), the report also shows high levels of inequalities across and within the six local municipalities. For instance, Raymond Mhlaba Local Municipality (RMLM) and Ngqushwa Local Municipality (NLM) have about 90,5% and 92,2% access to safe drinking water, respectively, while Mbashe Local Municipality has as low as 53,8% (Stats South Africa, 2018:117). Only 638 households in Raymond Mhlaba Local Municipality relied on flowing water, streams and rivers, as their water sources, whereas 18 662 households in Mbashe Local Municipality considered the same sources (Statistics South Africa, 2018:120). Financial challenges, illegal

connections (Ziyanda, 2020) and corruption (Nini, 2019) are some of the prominent aspects of Amathole District Municipality water governance dynamics resulting in social inequities in terms of access to water. In addition, Amathole District Municipality in 2015 declared a state of drought disaster (Republic of South Africa, 2018; Hendrik, 2019), exacerbating the vulnerability status of those communities that were heavily reliant on natural water sources that ran dry (Pather, 2019). Climate change, urbanisation, and population expansion all have a substantial impact on equitable water governance (Haglund, 2014). Although the aforementioned reports on inequities are reflected in Amathole District Municipality's (ADM) documents, the same concerns raised are a true reflection of water governance challenges that have negatively impacted inequities in access to water services in most municipalities across the country.

In light of the above evidence, it is clear that the problem of achieving social equity in water governance attracts attention from international bodies, policymakers, academia and public administrators with the overarching aim of supporting the development of a comprehensive water governance framework for social equity in their communities (Martinez, 2015:138). This framework is currently lacking partly due to little attention and prioritisation of social equity (compared to efficiency and sustainability) as a pillar of water governance (Chowdhury and Rasul, 2011; Koppen and Schreiner, 2014). Thus, the study argues for the urgent need for a water governance framework that reflects the gaps and provides a guideline for improving social equity in water governance. In addition, COVID 19 has re-emphasised the importance of ensuring access to water in most sectors and the country at large. Therefore, upon this premise, the study suggests a re-evaluation of existing policies, revision of budgets, reprioritisation of what is important, and development of frameworks that help in the achievement of Sustainable Developmental Goals (Goal No 6). Most importantly, it is the duty of public administrators to ensure that no one is left behind. Such an approach can ultimately lead to the promotion of justice, fairness, equality, efficiency, and effectiveness in both the procedures and the distribution of water services resulting in improved social outcomes for all citizens and residents across municipalities in the country

1.3 PROBLEM STATEMENT

Existing legislative frameworks such as the Water Service Act (Act No 108 of 1997) (among other post-apartheid policies) were meant to reform the water sector of South Africa to a more inclusive governance system. They were supposed to guide municipalities, promote social equity, and ensure that no one was left behind. Even though these strong legal frameworks still stand up to date, the rural-urban divide remains prevalent across South African municipalities with the 'haves' (mostly residing in urban areas) having better access to water services as compared to the 'have nots' (marginalised groups particularly those residing in rural areas) (Koppen and Schreiner, 2014; Parliamentary Monitoring Group, 2017), as reflected in Amathole District Municipality (ADM).

This situation in water service provision experienced by Amathole District Municipality has resulted in some communities lacking access to safe portable water (Damba-Hendrik, 2019; 2020) hence they resort to natural water sources, which are neither safe nor healthy (Lehohla, 2017; Statistics South Africa, 2018a; Pather, 2019), travelling long distances and in some cases spending several hours queuing for water in public taps (Damba-Hendrik, 2019; 2020). Consequently, this could have disastrous implications, particularly during the COVID 19 pandemic crisis. Under these conditions, the safety and health of vulnerable communities are jeopardised, the human right to water is compromised, and it becomes almost impossible to achieve the sustainable development agenda (Vision 2030).

Previous studies conducted in Amathole District Municipality have highlighted the gap between policy and reality in relation to water governance. Erasmus (2019:4) indicated that the municipality's failure to maintain infrastructure, negligence and financial challenges have led to these inequalities. Although the municipality attributes its failures to climate change (drought), Erasmus (2019) argues that its failure to address climate change impacts has promptly widened the gap. Reporters (Nini, 2019) argue that corruption, illegal connections, theft, and vandalism have also led to inequities in access to water services. Poor operational and weak institutional capacity and poor governance have further contributed to the municipality's failure to respond to community complaints on time in terms of water

challenges (Mbashe Municipalities and Mgquma Municipalities) (South African Water Caucus (SAWC), 2020).

Several studies have been conducted in the Amathole District Municipality to address water issues. For instance, Sonke Gender Justice (2019) advocated for government intervention, Maposa *et al.*, (2018) recommended the use of innovation and technology, and Hove and Osunkunle (2019) proposed the use of social media to educate communities on water conservation. However, while all these studies have been done to ensure everyone has access to water services and improve water governance in the municipality, the proposed solutions have not had the desired effects in the municipality in terms of achieving social equity.

Notably, existing literature indicates that no recognised study has offered a water governance framework for social equity. The absence of this type of framework was also noted by UN-Water (2019:14), which argued that current local water governance frameworks might limit or undermine the water sector's efforts, may result in poor sector performance, and are often "equity blind". As a result, municipalities in South Africa, including Amathole District Municipality, have failed to deliver equitable access to water. It is against this background that this study argues that a water governance framework for social equity is crucial to ensure the realisation of the right to water and address social inequities in water provision in Amathole District Municipality. Furthermore, such a framework could be a viable planning tool and reduce the disparities in water service provision by planners at the municipal level.

1.4 RESEARCH AIM

The aim of this study is to:

(i) Develop a water governance framework for social equity in South African municipalities.

1.5 RESEARCH OBJECTIVES

The sub-objectives are to:

(i) determine the conceptual and theoretical constructs that form the building blocks for a water governance framework for social equity in Amathole District Municipality.

(ii) identify social inequities in basic water service provision in Amathole District Municipality.

(iii) identify factors that impact on water governance and social equity and their influence on social inequities and basic water provision in Amathole District Municipality.

(iv) establish a sustainable water governance framework for social equity in South African municipalities.

1.6 RESEARCH QUESTIONS

(i) What conceptual and theoretical constructs form the building blocks for a water governance and social equity in Amathole District Municipality?

(ii) What social inequities exist in Amathole District Municipality with regard to water service provision?

(iii) What factors impact water governance and social equity, and how do they influence social inequities in basic water provision in Amathole District Municipality?

(iv) What should be incorporated in a water governance framework for social equity in South African municipalities?

1.7 SIGNIFICANCE OF THE STUDY

This study provided a water governance framework for social equity that can be utilised in advising the councils and municipalities on how they can identify gaps that have led to inequities and the measures they can implement to ensure fair, just and equitable distribution of water services. The research findings might assist the municipalities that are implementing the Indigent Policy, which has been undermined by who to target and who benefits, as reported by Stats SA during the 2011 census (57.9% having received Free Basic Sanitation and 71.6% having received Free Basic Water) (Tissington, 2008:9). Most importantly, the study will help the Water Service Authorities (WSA) in addressing and prioritising those who are disadvantaged, poor and marginalised in basic water service provision, particularly during and after pandemics like COVID 19. Therefore, communities must

rely on the smarter option, which requires water to maintain hygiene. As a result, the researcher contends that clean, safe, and sufficient water is essential for human survival; hence, the study suggests a framework for ensuring that water is delivered to these communities by identifying them and that effective procedures are put in place.

At the national level, the study will assist policymakers who make water service provision decisions to achieve the country's vision (Vision 2030) of reduced inequalities and the realisation of universal access to water (SDG 6). In this circumstance, water-related social inequities will not be a barrier to achieving overall social equity. Rather it will be a means to an end in eradicating poverty and existing inequalities as identified by the National Planning Commission in 2011 (Lehohla, 2017:12). Lastly, the United Nations (2012) and UN-Water (2019) contend that although water governance frameworks exist, they are equity blind, hence the need for this study, which fills the gap of incorporating equity in water governance issues. As an emerging concept, water governance knowledge is limited and still lacking (Pahl-Wostl, 2017; Olagunju *et al.,* 2019). Therefore, this study will add to the body of existing limited knowledge by developing a knowledge base that can guide water governance reforms.

1.8 DELIMITATION OF THE STUDY

The study is delimited to Amathole District Municipality. However, the proposed framework and recommendations suggested can be transferrable to other similar Water Service Authorities' contexts. Furthermore, although water governance is a broad concept, the study was only delimited to basic water provision (water and sanitation), which is the responsibility of local government in terms of Schedule 4, which specifically deals with functional areas of concurrent national and provincial legislative competencies, and this presented limitations on the results obtained. Lastly, the study utilised only a sample of the target population and secondary data sources.

1.9 CHAPTER OUTLINE

Chapter 1: Overview of the study

This Chapter introduced the study, which comprised of the introduction and background of the study, problem statement, research aim, objectives and research questions, significance, and delimitations of the study.

Chapter 2: Literature review

This Chapter reviewed related literature on water governance and social equity. To do so, a Conceptual, theoretical, and legal framework underpinning the study was presented. Lastly, the Chapter discussed related empirical literature highlighting the need for a water governance framework for social equity in Amathole District Municipality.

Chapter 3: Research methodology

The Chapter presented a detailed and step by step research methodology. The philosophical worldview (research paradigm) and the research design adopted were discussed. In addition, the Chapter discussed the target population as well as the data collection methods used, including the sampling method and sample size. Data analysis techniques were presented. Lastly, the Chapter provided ethical considerations and the strategies adopted to ensure rigor in the study.

Chapter 4: Data presentation, analysis, and discussion

Chapter four showed how the data gathered was condensed, analysed, and interpreted. The Chapter presented the results and findings and formed the basis for Chapter Five.

Chapter 5: Conclusions and recommendations

Attention was directed to summarising the researcher's findings, conclusions, and recommendations in Chapter five. Furthermore, the Chapter answered the main research objective: developing a water governance framework for social equity. Lastly, the significance of the findings in Public Administration was explained, and imperatives for future research were provided.

1.10 CONCLUSION

The first chapter of the study offered a detailed discussion on the introduction and background. The study's background was researched to provide a foundation for the study's goal, problem statement, priorities, and questions. The next chapter focuses on the review of literature, theoretical underpinnings, legal and policy frameworks pertaining to water governance (in the provision of basic water services), and social equity in South Africa.

CHAPTER TWO: LITERATURE REVIEW

1.11 INTRODUCTION

"In prevailing water policy and governance parlance-with its reliance on metaphors of the market, competition and its emphasis on individual and economic rationality when describing human behaviour- equity and justice either appear as after-thoughts or are simply assumed to synergistically happen alongside or even because of improvements in efficiency or sustainability" (Zwarteveen *et al.*, 2017:2).

Despite the fact that proponents of social equity find this idea to be extremely unsettling (Zwarteveen *et al.*, 2017:2), an extended amount of literature has indicated that this is the reality on the ground. As a pillar of water governance, social equity has received less attention than efficiency and sustainability. (Chowdhury and Rasul, 2011; Martinez, 2015; Adom and Simatele, 2021). As a result, the poor, marginalised, and those who lack access to water services will continue to suffer while the elite will have plenty of it. Increasingly intriguing is the fact that, as water quality and quantity continue to degrade (for example, as a result of climate change), water service reallocations will become more inequitable, favouring some over others (Zwarteveen *et al.*, 2017:2). Proponents of equitable water governance claim that how we manage our water will influence the extent of inequity and how different groups will be affected. Water governance is crucial in ensuring universal access to water since it determines who gets what water services, how, and when, based on the mechanisms in place and the social ties that exist (SDG No.6). As a result, against this backdrop, this Chapter offers a substantial body of literature that serves as the foundation for efforts and advances to redress inequities. In doing so, the conceptual, theoretical, and legal frameworks were presented supported by related empirical literature arguing that social equity should be at the heart of the contemporary water governance concern.

1.11.1 Evolution of social equity in Public Administration

The concept of social equity now lies at the centre of various water policy debates and public outrage over various societal problems, including the issue of access and

distribution of water services. As a result, contemporary water governance has unlocked opportunities for many actors to collaborate and work together to address existing inequities in water service supply and the looming prospect of a water crisis. However, this process requires significant attention and strong social equity advocacy to formulate strategies, ways, and recommendations to produce the desired results. Therefore, in order to address social equity issues, it is imperative to understand this concept with the realm of public administration and its inclusion in water governance.

The concept of social equity can be traced back to the 1940s through the works of Paul Appleby. It was later popularised in the 1960s and 1970s, decades marked by significant racial injustices and civil rights challenges for many ethnic groups in the United States. In 1968, the first Minnowbrook Conference was held in New York, serving as a foundation for the ideals of New Public Administration (NPA) (Guy *et al.*, 2012; Wooldridge and Bilharz, 2017). Taking a major stance in 1990, George Fredrickson proposed the inclusion of social equity (along with efficiency and economy) as the third pillar of Public Administration (PA) (Newbold and Holzer, 2020:351). Later, the National Academy of Public Administration (NAPA) also adopted social equity as the fourth pillar of Public Administration.

Furthermore, Rawl's "Theory of Justice," published in 1971, established the theoretical foundations of social equity in this field. Rawl's work in 1971 fortified institutions and public officials to be conscious of justice and fairness in their practices (Wooldridge and Bilharz, 2017:2). Also, during the 1960s, social equity issues were more focused on discrimination and racism; however, it is now expanding to include issues such as inclusiveness in participation, recognition and representation in decision making, income, geographical locations and disparities in access to public services such as water services among other issues (United Nations, 2012; Wooldridge and Bilharz, 2017). Although social equity has been considered as a pillar of public administration, recent studies by Durant and Rosenbloom (2020) indicate a different viewpoint. In their critic of social equity as a pillar of Public Administration, they argue that "…..it is those who would make untethered social equity a core value of public administrative practice who are weakening its

normative anchor in the Constitution and the rule of law…." (Durant and Rosenbloom, 2020:359). Their argument explained that public administrators are not bound by law to ensure social equity in their operations. Rather, they should let the law take precedence without discretion regardless of different prevailing situations. This study, on the other hand, emphasises the importance of social equity as a major pillar of public administration in attaining fair and universal access to water services.

1.11.2 Importance of social equity in Public Administration

This study views social equity from two facets in conceptualising the importance of social equity in South African Public Administration. Firstly, water services are considered human rights under international law (United Nations Human Rights Council (Resolution A/HRC/RES/15/9) in 2010). Water and sanitation are human rights that should be given in a fair, just, and equitable way, according to Section 195 on Principles of Public Administration in the South African Constitution, which was adopted in 1996 (Republic of South Africa, 1996). Furthermore, governments must ensure that the public is serviced fairly and justly as custodians of water services and public trustees entrusted with serving the public in a democratic country. As a result, the South African government has an international and constitutional commitment to ensure that social equity is realised in water governance through local government. However, achieving social equality can be accomplished if it is maintained as a pillar of public administration, directing policymaking processes and practices, and serving as an underlying concept in water service decision-making.

Secondly, this study contends that the government is partially to blame for the current inequities, and as such, it should also take part in redressing them. While it is true that by nature, water resources are unevenly distributed and that various factors (to be discussed below) have contributed to social disparities, empirical evidence suggests that governments have also played a significant role in widening the gap and are partially responsible for these glaring inequities in water governance (Wooldridge and Bilharz, 2017:4). The social and political economy of South Africa has been profoundly influenced by the bureaucratic systems of administration and

inflexible policies that were implemented throughout the three centuries of colonial and apartheid rule. (Tapscott, 2017:70). It left the country with disjointed institutions linked to poverty and inequities in fundamental service delivery, including water service provision in mostly black South African communities vs white minority ones. The Water Act of 1956, which fostered discrimination in allocating water resources and services, also guided the water sector (The Water Wheel, 2013:38).

The top-down strategy was adopted in the centralised government structure, and water services were managed at the national level, limiting ordinary citizens' involvement and participation. These acts of the government during the apartheid regime left huge disparities, a fragmented water sector, and huge backlogs in terms of infrastructural developments in rural areas, townships; the impacts are still visible to date. This legacy also resulted in poor service delivery, poor governance, and a lack of institutional and operational capacity in municipalities to perform their duties in a way that promotes equitable service delivery while maintaining efficiency and sustainability (Goldman *et al.*, 2013; Beck *et al.*, 2016). As a result, some communities are unable to obtain water services and must rely on unsafe sources such as rivers, dams, and swamps, which are both unsafe and unhealthy, particularly during pandemics like COVID 19 (UN-Water, 2019:108). In such a situation, vulnerable populations, particularly women and children, must spend a significant amount of time in queues or travel long distances to fetch water. While it might be argued that South Africa has moved on from apartheid, studies by Holland (2011) indicate that even after 1994, the democratic government has placed more emphasis on economic growth and efficiency, prioritising industrialisation and urbanisation at the expense of social equity (Hollands, 2011). All these arguments ascribe inequities to government actions, making social equity a critical component of Public Administration. Therefore, this study contends that government, as part of the public administration responsible for policymaking processes and ensuring that human right to water and sanitation services is met, has a significant role to play in the achievement of social equity in water governance at the local level. As a result, public administrators have a responsibility to address these evident social inequities, making social equity a crucial pillar of public administration.

1.12 CONCEPTUAL FRAMEWORK

This section explores the concepts of water governance and social equity in the provision of water services at a local level. Moreover, other concepts such as social values, governance, governance principles and their relationship are explored to better understand how they influence the achievement of equitable water governance. This approach is consistent with Jarabeen (2009), who defined the conceptual framework as "a network or a system of interconnected and correlated concepts that together convey a holistic appreciation of a specific phenomenon" as cited in Chakunda (2017:44).

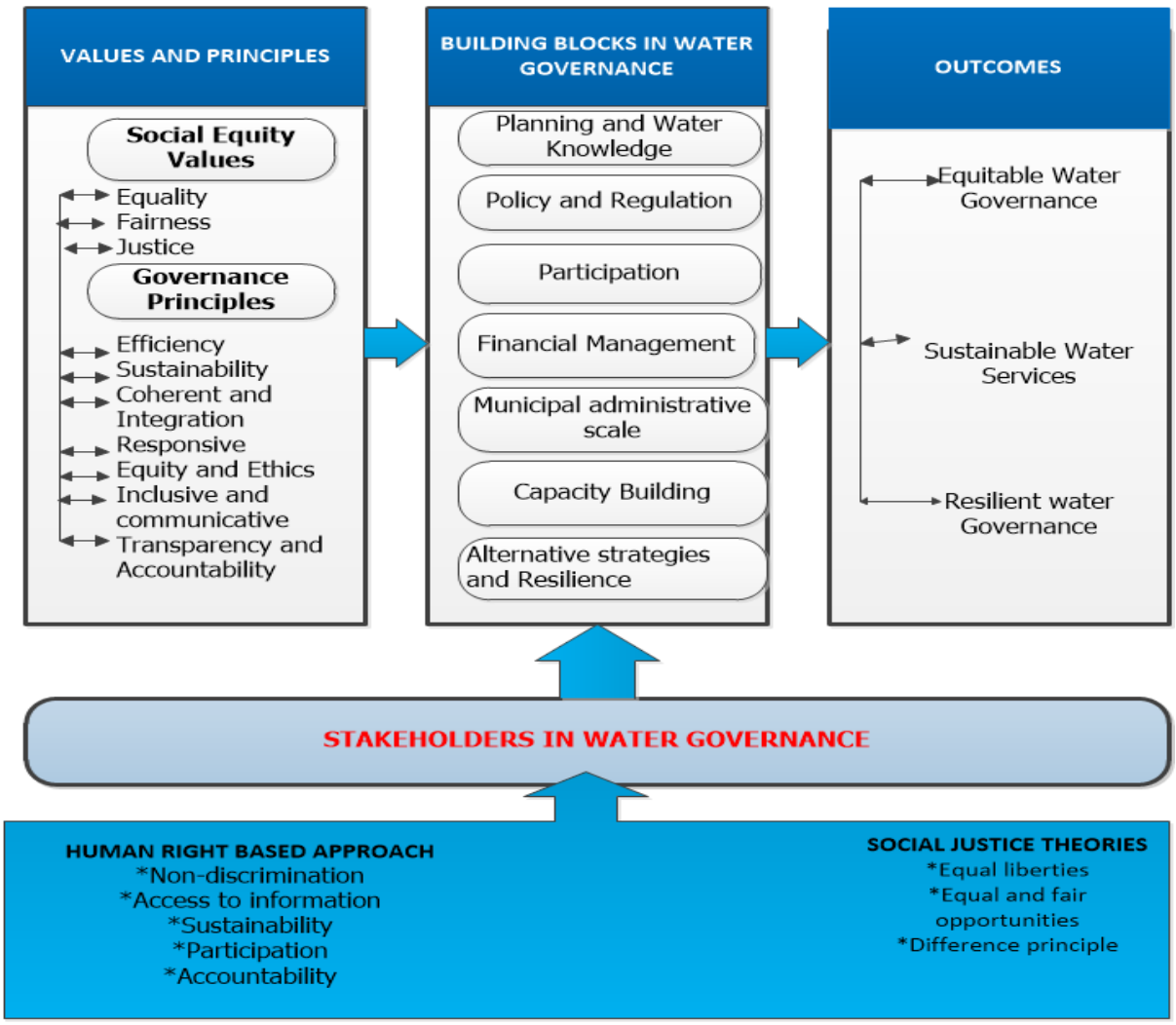


Figure 0.1: Relationship of variables in water governance and social equity

Source: The Researcher (2021)

1.12.1 Social equity

Social equity is conceptualised as a pillar of public administration and a pillar of water governance in this study. As a result, South African municipalities must provide equitable water services to their citizens, ensuring that actors and institutions responsible for the procedures, access, and distribution of water services follow just and fair practices. Nzewi (2013) defined social equity as the use of fairness and justice procedures in the implementation of public policy and the distribution of public resources (Nzewi, 2013:610), while Shafrtiz and Russell in Holland (2011:35) simply put social equity as the application of fairness in public service delivery and stressed the principle of equal treatment of every citizen. Yet, Sumra (2019:2) states that equal access to the rights, public resources, opportunities, and participation in developing countries is the widely accepted definition. More interestingly, Hart (1974) in Wooldridge (2017:3) denotes social equity as a habit or more of a spirit of right-doing, justice, and fairness that regulates the intercourse of men with men. It brings the rule of reciprocity in society. Hart's (1974) definition cements Rawl's (1971) idea of "a veil of ignorance" in which involved actors do not know their position, and as such, he assumes fair choices, policies and, practices to be made. Despite the many technical definitions of social equity, it is obvious that the concept's core principles of fairness and justice remain as the bedrock. This study, therefore, argues that social equity should maximise the social outcomes of the public. In addition, it should enable all social groups to have the same prospects for success, the same opportunities, and be protected from the adversities of life (Johnson and Svara, 2011:3). This mostly applies to marginalised and disadvantaged groups through the promotion of equality in a society with deep social and economic disparities. Most importantly, an equitable society should guarantee that access to public services (quality and quantity) is never affected by race, ethnicity, class, gender, or socio-economic status and geographical locations.

Municipalities in South Africa should also pay attention to the procedures (procedural fairness) rather than focusing on the distribution (distributive equity) component only if they want to achieve social equity in their water governance dynamics (Neal

et al., 2014:4). Transparency and participation of stakeholders and civil society are required in such a setting, ensuring accountability and effective communication. This idea was further developed by Johnson and Svara (2011:3), who argued that public administrators' efforts should include government partnerships with non-profit organisations, civil society, and businesses, especially in this era of "new governance" to achieve social equity. Authors such as Fraser (2000, 2005) in Joy *et al*., (2014) bolster this view by arguing that looking at the distributional element of public resources is important but not sufficient to reach a conclusion on social equity. Rather, he suggests a "trivalent conception of justice," which includes representation (in decision-making) and acknowledgement (of socio-cultural diversity), which, he says, promotes social outcomes (social equality) in communities when applied together by public administrators (Joy *et al*., 2014; Saunders, 2020). Moreover, in all of these endeavours, there is a constant need to maintain Constitutional values and respect all citizens' rights while also furthering the Constitution's ideals and forming a perfect unity with citizens.

1.12.1.1 Related values of social equity

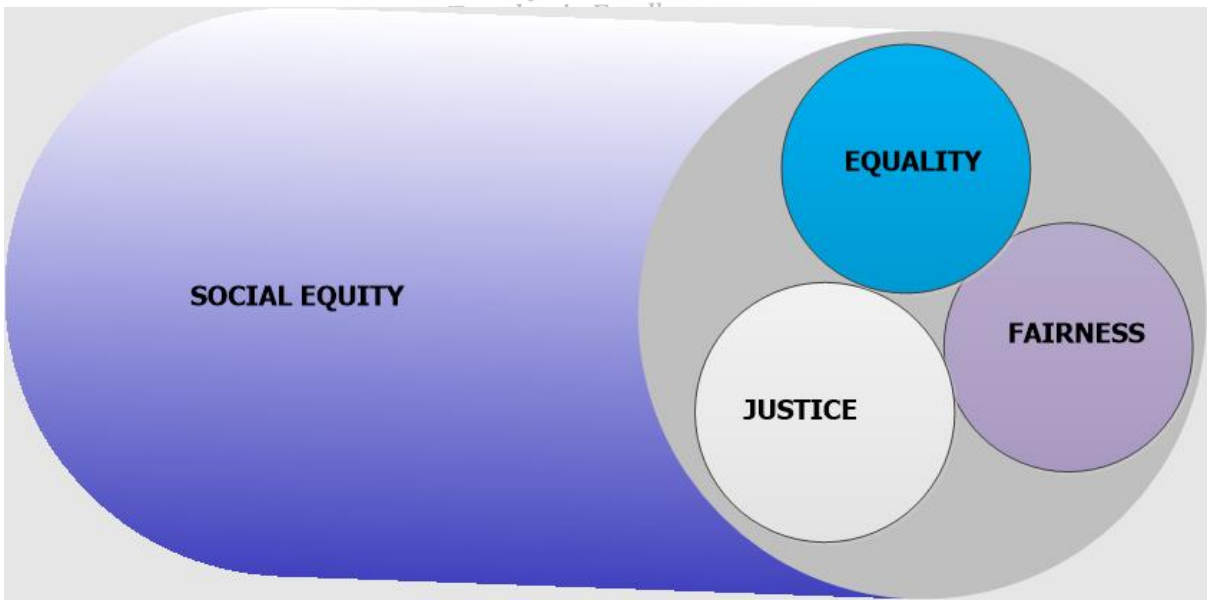


Figure 0.2: Related values of justice

Source: The Researcher (2021)

a) Justice

Despite its importance in the political and social economy, justice is one of the qualities that many states have yet to achieve. Part of this can be attributed to its ambiguity and lack of clarity regarding the justice strand being addressed, particularly in policymaking and public administration. Clarifying the strand of justice is vital in reducing the potential bias in policy and research. This requires all parties and actors involved in negotiations to always openly state their morals underpinning their understanding of justice (Zeitoun *et al.,* 2014:188). Therefore, in light of the above argument, this study upholds the egalitarianism strand of justice, unlike individualism and utilitarianism. The egalitarianism view, also known as the Rawlsian justice, seeks equitability of opportunities and ensures that the least advantaged and the vulnerable are recognised in water service provision (Zeitoun *et al.*, 2014:181). This strand of justice acknowledges that social inequities exist, and as such, it allows 'differentiated equality' to ensure equitable outcomes. Haglund (2014) further asserted that regarding social inequities, justice is also critically associated with the harms that emerge from power imbalances, discrimination, segregation, entrenched privilege, vulnerability, and marginalisation (Haglund, 2014:80). In defining the term, Johnson and Svara (2011) describe justice as a condition that not only involves equal and fair treatment of individuals but extends to having as much freedom without undermining the freedom or equality of others (Johnson and Svara, 2011:12). In the context of water governance, Rodina *et al.,* (2017:7) consider a 'just society' to include non-material commodities such as emotions (due to a lack of water services), safety considerations, and costs associated with exclusion from decision-making in water-related matters, in addition to a fair distribution of water services such as taps and pipes. This notion is also supported by Haglund (2014), who claimed that a justice analysis, when applied to public policy and administration, calls for attention to moral problems by defining the costs of exclusion suffered by actual individuals and distinguishing the winners and losers (Hugland, 2014:80). Unfortunately, despite the importance of distribution and social welfare in public policy, these moral repercussions are rarely critically and consistently examined in policymakers' decision-making, leaving some social groups behind in the provision of public services.

Furthermore, justice in water governance provides a different set of 'logic'. Through framing water as a human right, marginalised communities are redefined as 'rights holders' rather than 'recipients of public services' (Haglund, 2014:81). As a result, this enhances their capacity to make claims and obligate the state as 'duty bearers' to respond (Rammelt *et al.*, 2014:122). In support of this notion, Haglund (2014) further elaborates that justice enables the creation of new channels for leveraging government action (service provision) towards the poor or otherwise marginalised groups for the sake of resource distribution and elevating human dignity as a policy objective and legal mandate. Furthermore, he stated that in a just society, insufficient water provision is unacceptable, regardless of how "fair" the process is (Haglund, 2014). As a result, the justice factor in water demands water governance actors to directly tackle the political dilemma of resource distribution in a world marked by extreme inequality.

It is clear from the foregoing discussion that justice necessitates flexibility and judgment, as well as individualised care within the confines of law and policy. Therefore, in order to achieve social equity in water governance, there is a need to uphold justice on the part of policymakers, public administrators, municipal officials, and civil society. More so, there is a need to understand that justice does not require a solitary pursuit but rather calls for moral reflection and public endeavour. Lastly, it is critical to remember that principles of justice can influence both the thinking and practice of water governance, thereby ensuring social equity. While the above argument shows the significance of justice, scholars such as Durant and Rosenbloom oppose this ideology, arguing that only law should prevail (Durant and Rosenbloom, 2020:359) in public administration. Despondently, if their ideology is viewed using social equity lenses, then the gap between the rich and poor will remain high, and the poor will always suffer in the end. Ultimately, social equity will never be achieved. For this study, the reseacher support Johnson and Svara (2011:12), who claim that it is at these moments of exercising discretion and making judgements that administrators have the potential to take measures that advance or impede social fairness, in contrast to Durant and Rosenbloom's (2020).

b) Fairness

Fairness refers to removing bias, ensuring consistency, and following the same standards in treating all without favouritism (Johnson and Svara, 2011:12). Section 195(d) of the 1996 Constitution of South Africa clearly states that" Services must be provided impartially, fairly, equitably and without bias" (Republic of South Africa, 1996). This applies to both the distribution and procedures in water governance dynamics. In quintessence, principles of governance such as transparency and openness can be applied in water governance to ensure fairness. Furthermore, participation, capacity building and social learning can be engaged to achieve fair outcomes and processes. In order to achieve social equity, all parties from civil society (especially the poor, vulnerable, and disadvantaged), public administrators, the corporate sector, and other stakeholders must be represented and recognized without bias or discrimination. Therefore, the value of fairness implies that outcomes are more likely to be accepted even with those at a disadvantage if the processes and outcomes are considered fair (Rodina *et al.*, 2017:8). As a result, the success or failure of implemented policies and initiatives to create social equity is determined by fairness.

c) Equality

Equality is a state where everyone is treated equally without favouritism and denial of rights to life or the pursuit of happiness regardless of the groups in which one belongs (Johnson and Svara, 2011:11). Furthermore, equality has been one of the major values that many countries have struggled to achieve. However, its unfounded assumptions have been challenged in water policy and research. For instance, the cross-subsidisation of drinking water tariffs reflect the formal recognition of asymmetries of the capacity of actors. For example, women (marginalised group) are prioritised in the Integrated Water Resource Management (1992 Dublin Principles), whereas pro-poor water development policy shows differentiated equality that favours the marginalized, vulnerable, and poor to have access to water services (Zeitoun *et al.*, 2014:183). These scenarios reflect Rawl's (1971) difference principle, which maintains that inequality is encouraged if the "worst off" becomes "better off". Although equality is critical in ensuring the same treatment, rights, and

opportunities, it is not enough to achieve universal access to water services and achieve social equity. This assertion is further iterated by Zeitoun *et al.*, (2014), who observed that there are cases when "the goal of 'equality' itself is inequitable, for instance, when entitlements are equal but needs are unequal, and this may lead to subjective privileging of a particular group, state, or system (for example the previously mentioned pro-poor development' policy, or water policy reform to favour 'previously-disadvantaged communities') …." (Zeitoun *et al.*, 2014:185). It is upon this premise that this study calls for the equality of processes and equitability of outcomes if everyone is to have access to water services.

In spite of the importance of social equity in water governance, this pillar has been less prioritised when dealing with trade-offs on efficiency and sustainability. Investors and politicians have favoured 'dollar per drop' or 'nature per drop' rather than 'care per drop' (Zeitoun *et al.*, 2014). As a result, the gap between the 'haves' and the 'have nots' remain wide. For example, South Africa is one of the world's most unequal countries, as seen by its income Gini-Coefficient (0.679 as of 2009) (0.679 as of 2009) (Tapscott, 2017:78), which is also synonymous with water inequality. Furthermore, Gini coefficients for direct water use indicate that the disparities in rural areas in terms of access to water (0.95) are much greater than those for income (0.65) (Peters and Woodhouse, 2019:853). Despite new reforms and legislative frameworks that prioritize equality on the national agenda, South Africa continues to fall short of this goal, particularly in terms of water governance, particularly at the local level (Lehohla, 2017:12). As a result, ensuring equality of procedure and equitability of outcomes in water service supply is critical, as this will imply prioritising 'care per drop' in a genuine peoples-first policy over the pursuit of increased 'dollar per drop' to fit into the existing political economy (Zeitoun *et al.*, 2014:185).

Most importantly, failure to achieve equality of process and equitability of outcomes is likely to fuel the already existing disparities in water service provision, resulting in a lack of trust and confidence within the local government as Water Service Authorities (WSAs) and public trustees. Consequentially, this will hinder the implementation of programs and policies that are meant to promote social equity.

1.12.1.2 Measuring social equity

In the quest to achieve social equity, public administrators, government, municipal officials, stakeholders, and civil society are still confronted with challenges to operationalise, define, and measure it. Against this backdrop, the study has adopted the four criteria for measuring social equity by the National Academy of Public Administration (NAPA) Social Equity Panel.

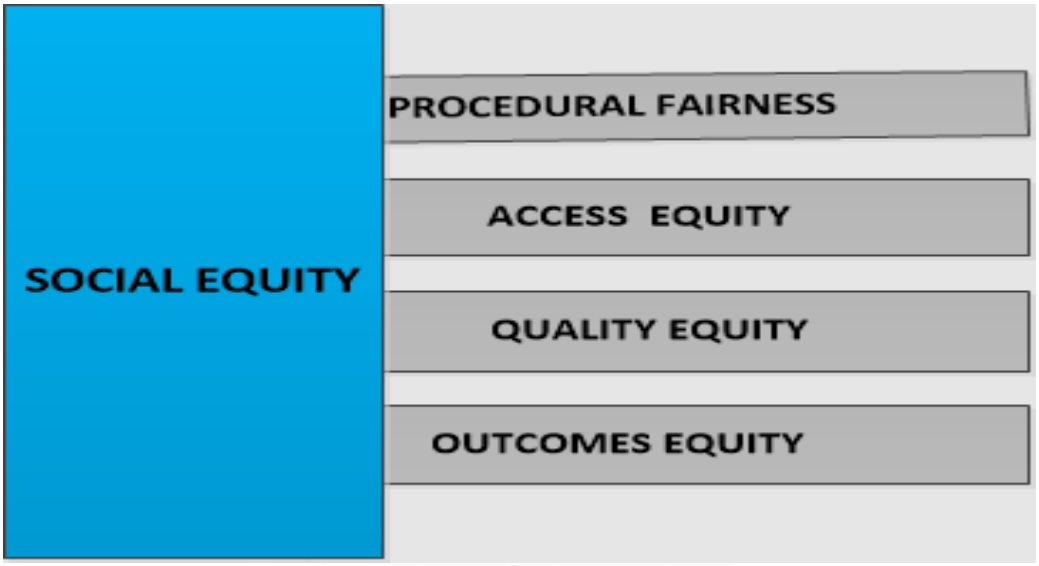


Figure 0.3: National Academy of Public Administration four-way criteria of measuring social equity

Source: Wooldridge and Bilharz (2017:5)

a) Procedural fairness

The concept of fairness and participation emerged in the late 1970s and early 1980s, as people realised the necessity of both distribution and procedural standards in achieving social equity (Neal *et al.,* 2014:4). In the context of this study, procedural fairness involves scrutinising fairness in the processes and procedures involved (Johnson and Svara, 2011:19) in water governance. In terms of policy-making and governmental programmes, procedural fairness implies a thorough examination giving attention to procedural rights issues (due process), equal protection (treatment in a procedural sense), and equal rights eligibility criteria (Johnson and Svara, 2011:19). As a result, public administrators have an ethical and legal responsibility to promote equity and protect constitutional ideals. In relation to water

governance, procedural fairness includes stakeholder involvement, widening transparency and accountability in procedures involved. Moreover, it involves platforms in which municipal officials, civil society, public and private cooperation involved in water governance actively negotiate values, policies, practices and decisions, accounting for losses incurred and accountability (Rodina *et al.*, 2017:8). As a result, procedural fairness is critical for establishing social equity because the decision-making and resource distribution process heavily influence what is considered fair and right. In essence, if all parties involved believe the methods and processes are fair and just, they are more inclined to accept the outcomes and ultimate judgments achieved, even if they are less than ideal.

Lastly, public administrators and those involved in water governance dynamics should be warned that procedural fairness is flawed when associated with power and politics. Therefore, the processes and procedures that appear fair may lead to highly asymmetric and unfair outcomes. This is reflected in a study by Forster *et al.*, (2017), which examined the structural and agential dimensions of power manifested during a Water User Association (WUA) establishment process in the Northwest Province in South Africa. In the study, it was noted that although the procedures and processes were followed, the establishment process was flawed due to power asymmetries, which led to the exclusion of vulnerable and marginalised, leading to highly unfair outcomes (Förster *et al.,* 2017:532). Therefore, it is important to ensure that power and politics respect the values of social equity if the implemented policy objectives are to be achieved.

b) Access equity

Access equity is also referred to as distributional equity, and it is about who gets services and who does not (Johnson and Svara, 2011:21). Existing policies, practices, and services must be assessed to determine the level of access to services and benefits according to the criteria. In addition, reasons for unequal access are identified and analysed. Access equity can be empirically examined, and if any gaps are identified, these should be addressed. The importance of addressing access equity was further developed by the UN-Water (2019), which proposed various measures to fight inequities in this criterion. Some suggested measures included

addressing specific barriers that hamper access by the marginalised and vulnerable, addressing affordability concerns, and reducing geographical disparities (UN-Water, 2019:7). This notion resonated with a study conducted by Johnson and Svara (2011) which asserted that principles such as simple equity, differentiated equality, target intervention, and redistribution could be adopted to promote access equity (Johnson and Svara, 2011:21). In support of the idea of differentiated equality raised by Johnson and Svara, Rawls' (1971) works also called for the application of differentiation, allowing inequality to exist if those that are "worse off" become "better off". This is premised on acknowledging existing inequities and enabling redistribution of services, thereby allowing social equity in water service provision. Another popular example widely applied in the South African context regarding access equity is that of target intervention. For instance, the Free Basic Service (FBS) (2001) water policy which is meant to reach groups that do not afford water services and those who are poor.

c) Quality equity

This criterion also relates to process equity. It calls for a level of consistency to be upheld regarding the quality of services provided to communities regardless of the distributional criteria used (Johnson and Svara, 2011:21). In the context of water governance, the study takes into consideration the United Nations service standards of sufficient, quality, and quantity of water services are acceptable (Camkin and Neto, 2016; UN-Water, 2019) as shown in Table 2.1.

d) Outcomes equity

The outcome criterion reflects a shift in focus from inputs to outputs and results. It looks at whether the implemented policies and programmes have the same impact for all groups and individuals being served regardless of the above-used criteria (Johnson and Svara, 2011:22). It uses the results-based approach and helps identify why different outcomes exist. In this criterion, emphasis is placed on the need to reallocate resources until the same results are achieved. However, precarious to this criterion is that many factors such as poverty and individual human behaviour might contribute to inequities apart from government intervention, as asserted by Johnson and Svara (2011:23). This is reflected in the current state of affairs in South Africa's

nine provinces. The same programmes, such as the Free Basic Service water policy, have been implemented with the same water laws guiding the Water Service Authorities. However, the impact has varied from one place to another. Although this is the case, equity considerations at this point apply as to how much inequality is acceptable and to what extent can and should the government intervene to reduce this inequality in results.

1.12.2 Governance

The theme of governance has become a part of current public policy management and administration trends. However, much of the focus is on developing systems that complement the formal authorities (Ribeiro and Johnsson, 2018:3). It has also been emphasised that the government is not synonymous with governance (Tortajada, 2010; Ribeiro and Johnsson, 2018). The concept of governance has also brought a paradigm shift in government styles. Governance systems have shifted from being centralised and using top-down approaches to embracing the ideals of inclusivity, transitioning to decentralisation and being more inclined to utilising bottom-up ways, thereby bringing up a shared responsibility aspect in society (Funke *et al.*, 2008; Schulz *et al.*, 2016; Ribeiro and Johnsson, 2018). In terms of public policy and administration, governance was created to allow for state reforms in response to criticisms of the previous model of public administration, which was connected with Fordist ideas. It, therefore, opposes the outdated and inefficient bureaucratic and rigid forms of interaction between state and society (Schulz *et al.*, 2016:242)

In terms of its meaning, the concept of governance has been defined and conceptualised in different aspects, but most interestingly is the fact that different international bodies uphold certain definitions of governance. These are applied based on their bias, personal interest and mandate (Tortajada, 2010; Zwarteveen *et al.*, 2017; Ribeiro and Johnsson, 2018). This notion is further solidified by Perreault in Taylor *et al.*, (2019:3), who noted that "….the vagueness and malleability of the term may serve to obscure political interest and ideological positions, as in the World Bank's formulaic calls for 'good governance', a position that is surely hard to argue

with……." Despite the variations in definitions, Lautze *et al.,* (2011) indicated commonalities in most proposed definitions of governance. In most cases, governance is viewed as a process of decision making, taking place through institutions and involving various or rather multiple actors (Lautze *et al.*, 2011:3). This assertion was advanced further by Troop in Ribeiro and Johnsson (2018), who viewed "….governance as a process of interactions based on accommodation as opposed to domination of decision making…" (Ribeiro and Johnsson, 2018:4). From this perspective, she stressed that governance refers to procedures and institutions rather than outcomes.

Therefore, the concept of governance involves various arrays ranging from processes, institutions, and mechanisms such as laws and regulations, both formal and informal. It involves the influential networks involved, government action, local initiatives, the international market, the private sector, and the civil sector (Ribeiro and Johnsson, 2018:4). Ribeiro and Johnsson (2018) contend that governance is how the society itself and the individuals that comprise it regulate all the different aspects of their collective life; it is not what the state does for the society. In the context of this study, governance is thus viewed as a precondition for attaining constitutional objectives for local government, particularly water service authority, ranging from providing service delivery to guaranteeing safety and healthy communities, among other goals (Sutcliffe and Bannister, 2020:13).

Given the foregoing considerations, it is obvious that many countries have already transitioned from a government form of governance in which the state provides everything for the society to one in which everyone shares responsibilities. While this might seem promising in achieving social equity, it is also important to note that flaws in governance are always present (Ribeiro and Johnsson, 2018:4). This is observed in the writings of various authors such as Lautze *et al.*, (2011), OECD (2015b), Zwarteen *et al.,* (2017) and Ribeiro and Johnsson (2018), who contend that the "water crisis is a governance crisis". The OECD's Multi-level Governance Framework and Principles on Effective Water Governance may potentially show an over-emphasis on addressing governance shortcomings (OECD, 2015a).

Against this backdrop, there is a need to have an effective governance system that ensures societal goals and improved societal outcomes. Governance frameworks or systems (policies, procedures, and agreements) that guide institutions must be put in place since it is difficult to observe governance. Furthermore, governance frameworks in which interested stakeholders are considered actors and institutions are understood as rules of the game (Ribeiro and Johnsson, 2018). This multi-stakeholder cooperation allows for interactions and decisions in relation to concerns over water services. In support of this view, UN-Water (2019:3) further asserts that these inclusive structures are essential in achieving equitable access and sustainable water supply. When these systems, structures, processes, and institutions are integrated with water development and management, the evolving notion of water governance emerges (Tortajada, 2010; Ribeiro and Johnsson, 2018; Olagunju *et al.*, 2019).

1.12.3 Water governance

The notion of water governance has appeared in various policy debates as an emergent field of study, an area of academic research, and as a publication (such as the International Journal of Water Governance and the Water Governance and Policy) (Zwarteveen *et al.*, 2017; Ribeiro and Johnsson, 2018). When tracing back the concept, Zwarteveen *et al.*, (2017:2) asserted that the positivists who largely dominate the water policy circles have come to acknowledge that water goes beyond its natural aspect as a physical resource. Rather it is highly social. He further argued that water 'governance' marks a change in policy emphasis to incorporate the institutional arrangements, financial and organisational aspects rather than being limited to infrastructure only. This shift is marked by the famous phrase "water crisis is a governance crisis" (Lautze *et al.*, 2011; OECD, 2015b; Ribeiro and Johnsson, 2018);). More specifically, economists and political scientists point to the term's origins as they discuss the government's decreasing direct role in water-related decisions, the distribution of responsibilities among civil society and the private sector in exercising control and coordination, resource allocation, and water service distribution (Zwarteveen *et al.*, 2017:2). As a result of these agreements, water service distribution is no longer only the responsibility of governments and the public

sector. Rather, voluntary sectors have proven to be essential in ensuring that water and sanitation targets are met. Empirical evidence tends to support these notions, as reflected by a study carried out in Chitungwiza Municipality in Zimbabwe, which concluded that to deal with challenges in water services access and supply, households have shifted to new sources (digging wells) rather than relying on municipalities (Zvobgo *et al.*, 2020:1). A study in Bangladesh by Rammelt (2014) also indicated that rural communities resorted to the installation of shallow groundwater tube wells, while a study carried out in Brazil and Ecuador by Machado *et al.*, (2019) indicated that communities are adopting measures such as Community-Based approaches to ensure water service provision (Machado *et al.*, 2019:1). While the study does not argue that all these measures and involvement come with their challenges and failures (for instance, shallow ground wells led to the arsenic contamination of water in Bangladesh), it contends that water governance has shifted to include civil society and other stakeholders as critical actors marking the diminishing role of government. Therefore, it is in this context that the study observes that states (as the public trustees) and Water Service Authorities (having the Constitution and legal obligation) need to involve these sectors (civil society and other stakeholders) to align their objectives and address challenges being faced in water service provision to ensure that justice and fairness are met and that no one is left behind.

There is no unified definition of water governance that has been agreed upon. However, it is important to understand that the manner in which this concept is defined has real implications on the actual outcomes on water resources and has major financial implications for financial resource policy. This is reflected by the United Nations Development Programme (UNDP) funded programmes and projects which focus on improving water governance and major educational efforts to train water professionals, for instance, by Global Water Partnership and the Arab water academy (Lautze *et al.*, 2011:1) and currently the United Nations Development Programme (UNDP) and Water Research Commission (WRC) in South Africa. In defining the term, Tortajada (2006) in Lautze *et al.*, (2011:1) "states that water governance is an amalgamation of the already existing concepts in use but under a

new trendy label". According to Tortajada (2010), water governance is defined as institutions, mechanisms, and processes through which legal rights are exercised, obligations are met, and differences are mediated by various stakeholders, civil societies, and interest groups in water-related matters (Tortajada, 2010:299). Overemphasis is placed on water governance in this definition because it is neither technical, practical, nor routine management functions (forecasting and staffing). Rather, it refers to the processes and institutions that affect water decisions (Lautze *et al.*, 2011:7). Özerol *et al.*, (2018) adopted the definition of water governance by Pahl-Wostl (2015:25), which describes this terms as "….the social function that regulates development and management of water resources and provisions of water services at different levels of society and guides the resource towards a desirable state and away from an undesirable state" (Özerol *et al.*, 2018:1). This definition incorporates the participatory aspect and the sole role of government function in achieving a desirable state. Özerol *et al.*, (2018) further purport the idea that water governance is not water management by defining water management as the "activities of analysing and monitoring, developing and implementing of measures to keep the state of a [water] resource within desirable bounds" (Özerol *et al.*, 2018:1).

South Africa has been reforming its water governance system (from policies to institutions). However, improvement appears to be limited in most situations and is frequently unpredictable. In his argument, Tortajada (2010:300) stressed out that most institutions are dysfunctional, have fragmented institutional arrangements, and others combine water governance as frameworks within Integrated Water Resource Management (IWRM). In the South African context, National Business Initiative (NBI) (2019:5) studies tend to support this notion and indicate that 47% and 31% of South African municipalities are in a critical state and are regarded as highly vulnerable, respectively. Water Service Authorities (WSAs) in South Africa are not creditworthy (with a water debt of over R13 billion) and are operating at high risk, according to the report (National Business Initiative, 2019:5). In addition, the OECD (2015b) indicated that inequities persisting in basic service water provision are governance failures, and studies in the pan European countries also reflected that most water governance frameworks are equity blind (UNECE, 2018). The study

asserts that the scenario presented by South African municipalities presents a huge barrier to the attainment of social equity in the provision of basic water services, and those that are poor and disadvantaged bear the biggest brunt. As a result, this study presents a water governance framework for social equity that can be implemented in South African municipalities.

1.12.3.1 The social dimension of water governance

Water governance has four dimensions which include the social (equity), economic (efficiency), environmental (sustainability), and the less mentioned political dimension (equal rights and opportunities). It is from these four perspectives that water governance takes various narratives as asserted by the Water Governance Facility (WGF), which contends that,

> " Water governance is about who gets what water, when and how, and who has the right to water and related services, and their benefits. It determines the equity and efficiency in water resource and services allocation and distribution and balances water use between socioeconomic activities and ecosystems. Governing water includes the formulation, establishment, and implementation of water policies, legislation and institutions, and clarification of the roles and responsibilities of government, civil society, and the private sector concerning water resources and services "(Camkin and Neto, 2016:87).

However, the study only dealt with the social dimension of water governance as per the assumption made by the UN's Water for Sustainable World cited in Camkin and Neto (2016), which argued that equity in access to water services is a fundamental step towards security. It further asserts that "the principle of equity, perhaps more than any technical recommendation, carries with it the promise of a more secure world for all" (Camkin and Neto, 2016:92). In addition, Muller (2008) further argued that addressing social, environmental, and economic dimensions can lead to a more effective and sustainable policy. Nevertheless, the pillar of social equity is highly neglected (Liao *et al.*, 2019:1) despite its significance in the achievement of the Sustainable Developmental Goals (Goal No.6 of universal access to water), the fulfilment of the Constitutional objectives (for instance, Chapter 2, Bill of Rights of

the 1996 Constitution of the Republic of South Africa) and international obligations (of the right to water and sanitation). A study conducted in the United States by Liao *et al.,* (2019) supports this claim by concluding that local governments need to adopt more sustainability options. Moreover, the study indicated that thirty-four (34) sustainability actions were adopted from the six hundred and fifty-one (651) local governments studied in five years. Liao *et al.,* (2019) further proclaimed that even those local governments prioritising social equity adopted more environmental protection-related policies (Liao *et al.*, 2019:1). Therefore, this mirrors how the pillar of social equity is prioritised in the entities responsible for public services, including water service provision.

The social dimension of water governance relates to equity considerations in water-related matters, but most importantly, it communicates to the equitable distribution of water services and resources among various groups and its effects on society (Camkin and Neto, 2016:90). To solidify this idea, Water Governance Facility (2015) further claims that, just as water is unequally allocated as a natural resource in time and place, water services are similarly unequally distributed among diverse economic and social groups, both urban and rural, settlements. Therefore, the social dimension of water governance should always consider water as a human right affirmed by the Human Rights-Based Approach (HRBA) when making decisions. This paves the way for everyone to have minimum access to water services, thereby maintaining safety, health, and dignity for all. In light of the above assertions, the study, therefore, views water as a human right that should be provided to everyone in a fair and just manner.

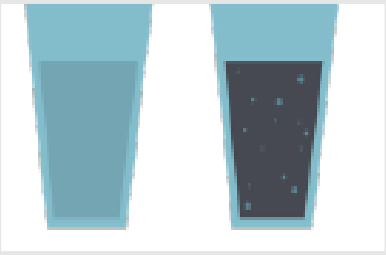
1.12.3.2 Framing water as a human right

In 2010, the United Nations Human Rights Council (Resolution A/HRC/RES/15/9) affirmed that human rights to water and sanitation should be included in international treaties (Bayu, Kim and Oki, 2020:1), and as such, they are legally binding. Consequently, all states and countries are mandated to oblige. South Africa, like any other country, is bound by these international laws and is duty-bound to guarantee the realisation of these international obligations of the right to water and sanitation. Water governance through Water Service Authorities (WSAs), who are

mandated with the primary purpose of water service provision, is critical to the realisation of this fundamental right. Therefore, much more needs to be done to ensure that these institutions fulfil this obligation in South Africa and globally. It is also worth noting that water governance has an impact on other human rights like the right to education, food, health, life, and human dignity (UN-Water, 2019:43). This is due to the fact that the human right to water and sanitation is intertwined with other human rights. As a result, failure to fulfil this right will negatively affect the realisation of other rights. The United Nations, on the other hand, specified the standards that should be satisfied to explain more on what is judged sufficient in terms of these human rights in water service provision, as summarised below.

Table 0.1: Normative human rights criteria

CRITERIA	STANDARD
Sufficient  **Between 50 and 100 litres of water per person per day are needed to ensure most basic needs(WHO)**	According to the World Health Organization (WHO), 50 to 100 litres of water are deemed enough per day to ensure that health concerns and basic needs are met. Sufficient means that water provided should be enough for domestic use, such as sanitation, drinking, food preparation, and washing, among other household hygiene activities. However, these amounts may differ depending on the contexts (for instance, South Africa set 25 litres per person per day) as some might require additional volumes than others depending on the climatic conditions, among other factors. Besides, sanitation facilities should also be sufficient to avoid overcrowding and unreasonable waiting times (UN-Water, 2019:37).
Safe  **Water for personal and domestic uses must be safe and free from contaminations**	One of the most daunting challenges in water that is supplied is the issue of safe water. Water supply should be safe from chemical substances, microorganisms, and any threats or risks to human health regarding the human rights framework. The guidelines provided by WHO gives a basis for developing national standards that, if properly implemented, will ensure the provision of safe water (Camkin and Neto, 2016; UN-Water, 2019)
Acceptable	All water facilities should be appropriate in cultural terms, and they should be gender-sensitive, ensure privacy and a life cycle. Water provided should be of an acceptable odour, colour, and smell (Camkin and Neto, 2016). "To reach equality of water and sanitation service provision, States must work towards eliminating existing inequalities. This requires knowledge of disparities in access, which typically exist between and within groups with different incomes and between and within rural and urban populations. Further disparities are based on gender and the exclusion of disadvantaged individuals or groups" (UN-Water,

 **Water and sanitation must be safe, private and allow dignity**	2019:38).

CRITERIA	STANDARD
Accessibility  **The water source has to be within 1,000m from home, and the collection time should be less than 30minutes**	Water services should be physically accessible to households, educational facilities, workplaces, or health institutions within or in the immediate vicinity. Collection time should not be more than 30minutes, as stated by the Joint Monitoring Programme (JMP), and the distance has to be within 1000m to collect water from an improved source. This is more elaborated in SDG Number 6, in which the agreed objective is "*drinking water from an improved water source that is located on-premises, available when needed and free from faecal and priority chemical contamination"* (UN-Water, 2019). Furthermore, information related to water issues should be easily accessible, water and facilities should be accessed without discrimination and should be economically accessible (WaterAid, 2011:14).
Affordable  **Water costs should not exceed 3% of household income**	One of the main concerns which have led to high inequities is the affordability issue. Water has to be affordable so that it does not limit the capacity of a person to acquire other basic services such as food, health, and education (UN-Water, 2019). According to UNDP, water costs should not exceed 3% of the household income. Moreover, in upholding human rights, disconnecting or denying access to water because of failure to pay violates human rights (Camkin and Neto, 2016; UN-Water, 2019).

Source: UN-Water (2019)

1.12.3.2.1 Five cross-cutting criteria for human rights

The progressive realisation of human rights is bolstered by several obligations designed to keep the states on track. It is therefore crucial that in doing so, states should ensure that the valuable resources are used efficiently, and this level of efficiency varies from one country to another (Albuquerque and Roaf, 2015:32). Similarly, the National Human Rights Institutions (NHRI) (2015:40) argue that the right to water and sanitation should be viewed in the broader context of human

rights and as such, both substantive and procedural principles should be observed. While the National Human Rights Institutions (NHRI) (2015:40) identified these principles to include non-discrimination, access to information, accountability, participation, and sustainability, Albuquerque and Roaf (2015:32), on the other hand, identified the inclusion of impact as one of the principles in the criteria for good practices in the realisation of the right to water and sanitation as summarised in Figure 2.4 below.

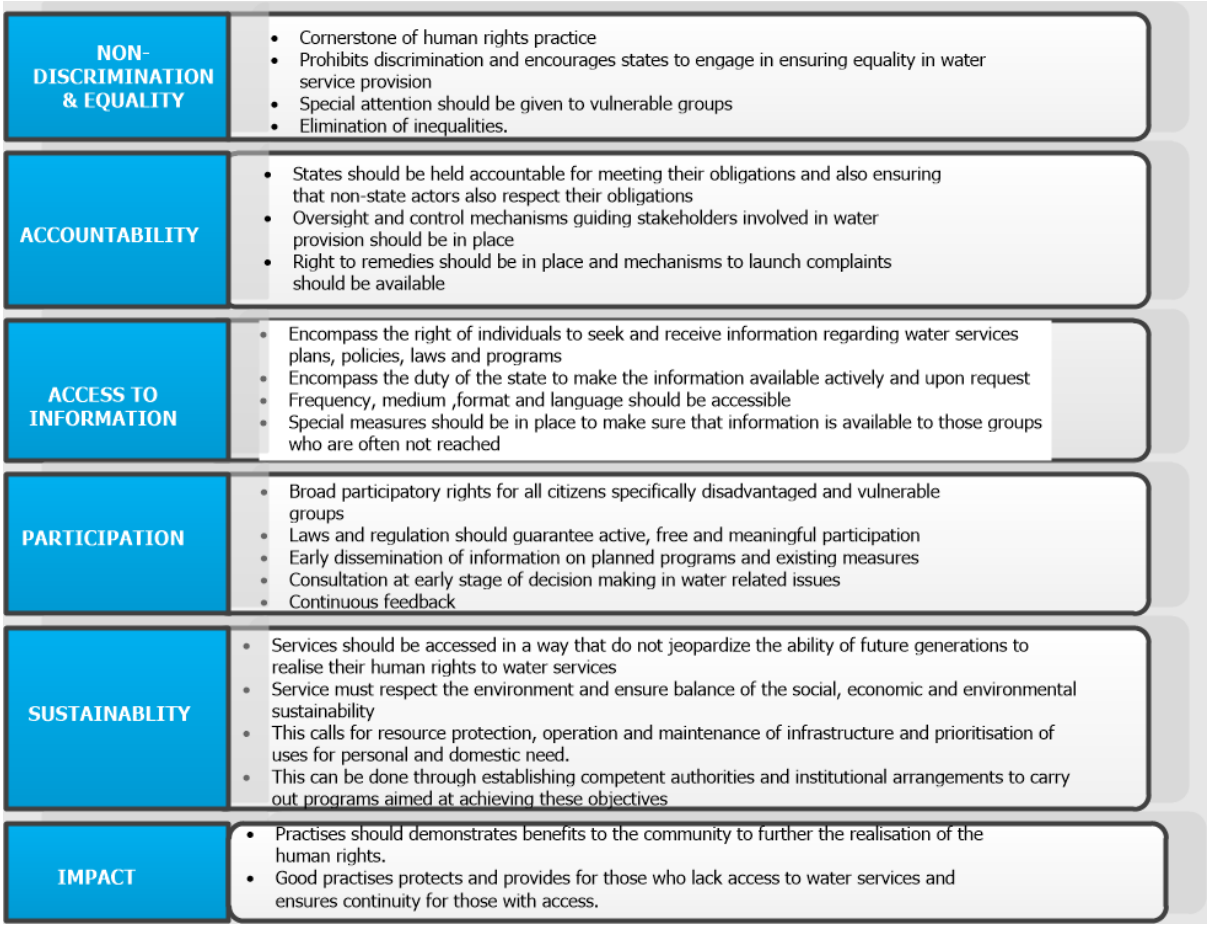


Figure 0.4: Criteria for good practises related to the rights to water and sanitation

Source: The Researcher (2021)

1.12.3.3 Principles of effective water governance

Every country has a water governance system, as discussed previously in the foregoing discussion; nonetheless, the major goal is to improve or have an effective system if the desired objectives are to be reached. The OECD (2015:3) argued that to cope with the current and future challenges in the water sector, there is a need

for robust public policies that are tangible and outcome-oriented, and water governance principles can be used as tools to accomplish this goal. More notably is the short supply of widely recognised qualities for effective water governance (Lautze *et al.*, 2011:4), and as such, the study adopted the UN-Water's ten criteria for effective water governance as well as the twelve principles for effective water governance suggested by the Global Water Partnership (GWP). Although there are differences in relation to the groupings of these concepts, the two suggested sets of principles are consistent with each other. In addition, other scholars such as Lautze *et al.*, (2011), OECD (2015a), Camkin and Neto (2016:87), and (Ribeiro, and Johnsson, 2018) also emphasise the same principles as effective water governance principles.

Furthermore, the policy brief of New Zealand's Land Care Research, which developed and adopted the Global Water Partnership (GWP) principles of effective water governance, stated that these guiding principles help to establish clarity, credibility, and consistency in a situation where decisions require flexibility, such as when justice must be applied and outcomes are not predictable (Camkin and Neto, 2016:87). Nonetheless, in 2015, the OECD published a separate set of twelve principles from those previously mentioned, which will be more applicable for this study as part of the building blocks (see section 2.2.5) for water governance. However, it is important to note that their theoretical foundation was also based on these good governance principles (OECD, 2015a:5).

The principles serve as a fundamental foundation for assessing water governance and providing theoretical underpinnings for critically evaluating policy and decision-making processes and establishing institutions. Most importantly, these assessments enable the identification of opportunities and enhancing systems (Ribeiro and Johnsson, 2018:8). After realising the global pressure on the water around the world and that the water sector is highly fragmented, the OECD believed that these principles could help the management of the "too much", "too little", and "too polluted" water in a way that is sustainable, efficient and inclusive and in a reasonable time frame (OECD, 2015a:5).

Placing more emphasis on the interdependency of these principles, McGarry *et al.*, (2010:3) argued that as of late, these governance principles have been treated in isolation and as outcomes rather than as interdependent components and as a means to an end. They further indicated that most countries with the weakest governance face a water crisis at large. Figure 2.5, therefore, provides a summary of the water governance that was adopted for this study.

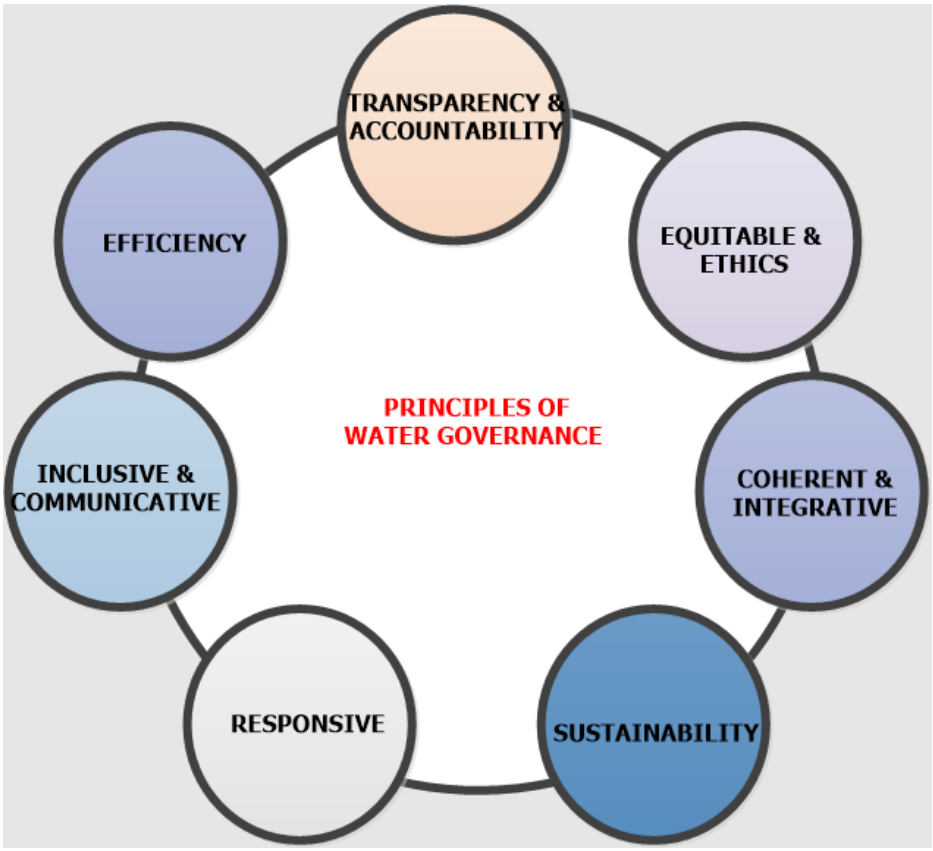


Figure 0.5: Principles of Effective Water Governance

Source: The Researcher (2021)

a) Transparency and accountability

Openness and transparency, as well as a lack of accountability, are two of the most lacking principles in South African local governments and other government areas, from policy processes to institutional operations (Auditor-General [South Africa](AGSA), 2018; Bruce, 2020). This has resulted in a lack of trust within the local government sphere and in the government itself. As a result, it is critical that all water-related choices be as transparent as possible. Furthermore, information and records should be available to the public and in languages and platforms easily

accessible (Camkin and Neto, 2016). On the same note, decision-makers should always be responsible and accountable for their actions and decisions and should be held accountable if the intended goals of water governance are to be achieved. The implications of these principles in attaining equitable water service supply include that transparency and accountability prevent resource misuse, expose corruption, and allow donors and funders, as well as stakeholders, to understand where and how their money is being spent. Most importantly, this principle helps to establish procedural fairness in water governance, resulting in more acceptable programs and initiatives that affect all the decisions and developments made which determines the achievement of social equity and universal access for all in water service provision.

b) Equitable and ethical

Although equity is a pillar of water governance, it is also a principle that must be observed to achieve equitable outcomes. There is a need for equal opportunities, justice, and fairness in water governance (Khater *et al.*, 2013). In the same way that ethical considerations and moral obligations play an important part in water administration, so do moral obligations. It is imperative to keep in mind that water is a human right, that "water is life," and that "sanitation is dignity," and that there is always a need to follow society's ethical values and moral standards (Camkin and Neto, 2016:87). The subsequent implication of ensuring ethics and equity as principles of governance is that everyone will be recognised. The aforementioned moral obligations also provide room for those who have power, control, and access to water services to rethink their actions and decisions regarding water (in)justice and the implications of their actions on those who are vulnerable and lack access.

c) Efficiency

Various types of efficiencies should always be considered in water governance. However, the study argues that these types of efficiency should not take precedence over other pillars such as equity and sustainability. Although efficiency in terms of economic proficiency is the one that is always emphasised by the classical economic theory, it is also important to note that water governance needs to observe

environmental, social and political efficiency and find a balance among the four (Camkin and Neto, 2016).

d) Inclusive and communicative

The principle of inclusiveness is crucial in the achievement of social equity in contemporary water governance. It brings together all the actors and parties involved, especially those responsible for service delivery to the end-users of the service. Most importantly, this aspect addresses power imbalances and discrimination, meaning the poor and vulnerable are included, and those without a voice are heard (Camkin and Neto, 2016). There is a need for water governance to be communicative and inclusive. All groups should be recognised and represented in order for their voices to be heard and for social equity to be achieved. This was further elaborated by Fraser's (2000; 2005) (as cited by Joy *et al.,* 2014) trivalent conception of Justice, which asserts that recognition and representation have a significant role in achieving social equity. If fully applied, the principle enhances access equity by clarifying where, how, and why some people lack water services and establishes procedural justice through transparency and openness. More importantly, communication and inclusion in the water governance dynamics will lead to more acceptable strategies and suggestions by those involved and affected (Camkin and Neto, 2016).

e) Sustainable

Water governance should be cautious about the future generations and must fight to serve both the present and future generations due to the rate of climate change impacts and natural disasters (Camkin and Neto, 2016). Some of the current challenges and impacts are a manifestation of the decisions made decades ago. It is therefore imperative that sustainability is observed, and if not, intergenerational inequities will always be present. Most importantly, it is critical to note that the achievement of sustainable outcomes is hinged by stakeholder involvement in the decision-making processes (McGarry *et al.,* 2010:3), requiring openness, transparency, accountability, and responsiveness.

f) Responsive

Water governance institutions and decision-makers should be responsive and provide suitable services to all stakeholders (Khater *et al.*, 2013; Godfredamankwaa, 2020). New circumstances and changes in demand will always exert pressure (low or high) in water governance, and there is a need to be responsive in time. For instance, the COVID 19 pandemic requires massive volumes of water to contain the virus's spread, particularly in highly populated informal settlements with limited public utilities to maintain sanitation and remote locations where municipal water is rarely available. Therefore, governments and Water Service Providers must invest in institutions that can respond to this pandemic and future crisis. While temporary measures have been utilised in response to COVID 19 in South Africa, such as the deployment of 16 224 tanks (9223 had been installed and attached to a water source) in water-stressed communities as of 29 April 2020, making use of water trucks (Mudombi and Montmasson-clair, 2020), more permanent measures or long-term solutions should be put in place to ensure water access, especially to vulnerable communities.

g) Coherent and integrative

Water governance requires a coherent and integrated structure, especially given the difficulties of climate change and rapid population expansion that countries are facing. Coherence requires political leadership and a strong responsibility on the institutions at different levels to ensure a consistent and integrated approach within a complex system (Khater *et al.*, 2013; Camkin and Neto, 2016). All these actions imply reaching the poor and those who will not be resilient due to these pressures. Therefore, social equity in water governance will be accomplished through an integrated strategy.

1.12.4 Challenges to achieving equitable access to water services

Countries, states, and communities find it difficult to govern and use water services equitable, fair, just, and reasonable, posing a challenge in water governance. The researcher does not propose that everyone should have the same amount of water or that water should be free, despite the fact that the study supports water services as human rights. However, the study argues that everyone should be granted a fair opportunity to use, control, and access water services (Khater *et al.*, 2013:46). The

argument presented here is that the society and communities, stakeholders, the government, and all those involved in water governance should be aware of the drawbacks of water exploitation directly or indirectly so that no part of the society, group, or household will be disadvantaged as a result of other people's actions. Therefore, the researcher divides the issues of equal water access into four categories for this study.

a) Geographical concerns: rural-urban gap

Water service provision varies by geographic area, and in most countries, rural areas are always falling behind urban areas (United Nations, 2012, UN-Water,2019; Jiwani and Antiporta, 2020). However, while it is true that inequities also exist in informal urban settlements and within the rural areas themselves, the study asserts that the rural-urban gap cannot be undermined. Citing examples from various countries, the Arab report of 2010 and 2013 indicated that there is always a lack of access to water services in rural and poor areas and marginalised groups in the Arab countries (Majzoub, 2010; Khater *et al.*, 2013). A study in the Pan European countries by United Nations in 2012 also indicated that access to water and sanitation services in the rural areas in the pan-European region is 10% lower than in urban areas. The report further stated that rural household is eight times more likely to lack access to piped water at home than in urban areas (United Nations, 2012:26). COVID 19 has also exposed the rural-urban divide, demonstrating that rural communities still lack access to water services. . This is further expounded in a study by Jiwani and Antiporta (2020) in Sub Saharan Africa, which indicated that most of the population in the African region have lower access to water service than their urban counterparts.

Furthermore, the aforementioned study reflected that rural-urban disparities are wide across all countries. For example, in Rwanda, it reaches up to 41.8 % while the rural population represents 82.8% of the total population and, yet, only a quarter has access to washing facilities with water and soap (Jiwani and Antiporta, 2020:2). Similarly, this is also the case in South Africa. South African rural communities are the most affected areas without access to water services, according

to the Auditor-General [South Africa] (AGSA) report presented at the Parliamentary Monitoring Group (PMG) meeting in 2017 (Parliamentary Monitoring Group, 2017). The Department of Water and Sanitation's (DWS) response to COVID 19 through the provision of water tankers in rural regions underscores the fact that rural areas, as well as once-owned black townships and informal settlements, lack access to urban areas (Harrisberg, 2020).

Furthermore, according to the Amathole District Municipality's Water Service Development Plan (WSDP) (2017-2022), rural areas are still underperforming, and the municipality is still far from meeting national water service standards. The implication of such inequities shows political marginalisation that systematically excludes poor people from opportunities and services. These existing geographical disparities are attributed to economic, political, and technical factors.

Economic factors highly influence geographical disparities. Rural locations are typically associated with low income, high poverty rates, and a low population, making them costly to serve (UN-Water, 2019:108). This results in investors, governments, and stakeholders focusing on urban areas or rather richer communities where households can pay for the services. Consequentially, rural areas are neglected, and as such, the rural-urban gap remains high.

Political factors such as lack of political attention, electoral consideration, and political influence also play a major role in developing and providing services in rural areas (Chatila, 2010:72). The United Nations (2012) indicated that it is much cheaper to provide services to unserved households in urban areas than rural areas. In addition, the same report by the United Nations (2012) observed that investments in urban areas also show greater impact per capita, more political visibility, and benefits to many potential voters, hence prioritising urban areas. However, this political urge influences investment decisions to continue developing already serviced areas (in most cases where elites live)(United Nations, 2012). Such political decisions imply that advanced areas (major cities) will be highly subsidized while areas lagging will gain very little support. Resultantly, these areas lagging will barely benefit from the policies targeting them in the first place. Thus, to address these issues, there is a need for political commitment and political will to ensure that

policies, strategies, building capacity and technical support are devoted to developing these underserviced rural areas to ensure that no one is left behind.

Lastly, *technical factors* also play a major role in geographical disparities. Economic and political constraints make it difficult to attract qualified personnel, investors, and proper research to develop technical solutions specifically for rural areas as they require different solutions than urban areas. Less effort and time have been devoted to developing appropriate technical solutions for areas lagging. As a result, the level of development in rural areas remains low, widening the rural-urban gap. As a result, if social equity is achieved, the policy framework should provide sufficient incentives to attract suitable development and investment in these areas. Small technical and community empowerment on saving water can be applied to utilise the limited resource and ensure that everyone has access. Such measures may include fixing leakages, greywater harvesting and household landscaping (Mudombi and Montmasson-clair, 2020:11). However, in order to produce feasible and effective technical solutions that match each situation, political and economic aspects must be considered.

b) Affordability concerns

Among the pressing issues in which countries and various states fight to ensure equitable access to water service provision is affordability. The World Health Organization (WHO) specifies that water services must be affordable and should not exceed 3% of total income in its definition of the human right to water and sanitation (Camkin and Neto, 2016; UN-Water, 2019). Moreover, water costs should not limit a person to access other basic services such as food, health, and education (Camkin and Neto, 2016). According to the United Nations (2012), concerns about affordability extend beyond tariffs. Alternatively, it should also incorporate the income and income distribution in a given country, tariffs policies, individual behaviours, and subsidy policies. Most importantly, this view of affordability concerns in water makes it a social protection issue requiring the incorporation of water services within social policy discussions.

c) The poor, marginalised and vulnerable groups

The United Nations Human Development Report (UNHDR) (2016) purports that those who are poor and living in poverty, the marginalised, vulnerable, and disadvantaged, are the targeted groups by the Sustainable Developmental Goals (UNDP, 2016; UN-Water, 2019). Additionally, the United Nations Secretary-General, Ban Ki-moon, in his statement asserted that" The children who have no clean water to drink, the women who fear for their safety, the young people who have no chance to receive a decent education have a right to better, and we have a responsibility to do better. All people have the right to safe drinking water, sanitation, shelter and basic services." Despite the highlighted concerns, there is still persistent inequities in these groups, and much needs to be done to address these concerns. It is also important to note that the exclusion of such groups may be intentional or unintentional. However, the implication is that no matter the reason, these communities will suffer the most and will be denied their basic rights not only to water but those rights too which are dependent on (in)access to water services such as education, health, and freedoms among others. This was further elaborated by the United Nations (2012), which indicated that in most cases, people or vulnerable communities do not have the same freedom when it comes to enjoying water services as the rest of the society.

Therefore, in addressing such disparities, wide calls have been made in relation to understanding water as a human right that is crucial for human survival and human health. There is a need to always remember that "water is life "and "sanitation is dignity". Therefore, a participatory and inclusiveness approach should be adopted. These groups should be involved in decision making from planning to evaluation. Through financial and government support, capacity building, awareness, and empowerment, an integrated approach should be extended to these groups. Furthermore, emphasis should not only be on the human right to water services but also on the end user's responsibility in water management through the payment of tariffs and protecting water services (from pollution, misuse, and wasting water) so that others will not be disadvantaged (United Nations, 2012).

d) Water resources availability

Water resource availability has become the scapegoat of many Water Service Authorities due to their failures to address the lack of access to water services in their communities. Its consequences, on the other hand, cannot be overlooked. More innovative ways and strategies are required to urgently address the challenges posed by the negative impacts of climate change which has resulted in flooding, long dry periods, and persistent drought seasons. Many towns and villages will lose access to water if difficulties with water resource availability are not addressed, as they rely on local water sources. In trying to address these issues, the United Nations (2012) stated that polluted water could be treated to make it suitable for drinking while freshwater can be transported over long distances to reach those who lack access (United Nations, 2012). However, such procedures may imply exorbitant expenses, rendering the services expensive. Therefore, more support and intervention from the government, community, stakeholders and interest groups is required through funding, capacity building, awareness on water conservation, and innovation to ensure that everyone is reached and has access to affordable water services.

While it is true that addressing inequality and inequities in water service provision is partially a matter of finding new technical solutions for safe and sufficient water to be provided into informal settlements, rural areas and ensure that the marginalised and vulnerable have access; attention also needs to be paid to the political priorities which have historically led to these disparities. There is a need to ensure that current practices are remedying the situation and not aggravating or creating problems for future generations, which will lead to intergenerational inequities.

1.12.5 Building blocks for effective water governance

The building blocks on effective water governance presented here have been established under the premise that there is no "one size fits all" solution when dealing with water challenges (OECD, 2015a, 2018) and the recognition that water governance issues are highly context-specific (Olagunju *et al.*, 2019; Keller and Hartmann, 2020) and as such, they vary from one context to another. Therefore, there is a need for water policies and decisions to be adapted to specific water resources and locations. Furthermore, there is a need to adapt to the ever-changing

circumstance if social equity and universal access to water are to be achieved. While the above arguments are true, this study provides the basis and foundation in which context-specific frameworks and solutions can be generated. It provides a guiding tool that will help the Water Service Authorities, planners, and policymakers establish sound policies and decision-making to ensure equitable water service provision. Similar to the OECD (2015a) principles of effective water governance, these building blocks will assist those in water governance to assess their performance by understanding what works and what does not. Lastly, these building blocks will also assist in developing the water governance framework for social equity.

Figure 0.6: Building blocks to effective water governance

Source: The Researcher (2021)

a) Planning and water system knowledge

It is imperative that there exists required excellent understanding regarding the water system (what is available, what needs to be done, clear targets, and the means and ways to achieve the objectives), the inputs, processes, outputs, and outcomes. Information about the artificial and natural resources available should be well communicated and documented. The backbone of the water governance framework is knowledge of the water system, and its success is dependent on the knowledge available. Therefore, water knowledge must be current, as it is heavily reliant on ever-changing societal and environmental functions. In quintessence,

there is a need to keep track and always have accurate knowledge available to the relevant people to avoid crises. In this case, the governance aspect mandates information sharing among the state, civil society and the private sector, and all other interested groups. Thus, if social equity is to be realised, shared accountability must be included.

Drawing lessons from the water study in Arab in 2010, it is clear that water policy formulation is very data sensitive, and it requires reliable data to be the basis for sound planning and implementation of policies (Chatila, 2010:77). Acquirement of this knowledge will influence the policies, legislation, rules, and regulations that are made, affecting the budgets and the feasibility of suggested measures and ways. In general, having a good understanding of the water system will influence planning since people engaged will have enough information to work with. Furthermore, the availability of information about water management is critical to the officials and public administrators but also for communities and the civil society as end-users of water services. It enables people to make informed decisions about water usage (drinking, swimming, irrigation); as a result of this information, people may make better decisions to protect themselves and others from damage (Krchnak, 2005:34). The importance of this aspect is further highlighted in the Cape Town Day Zero in South Africa, which almost left millions of people without water due to information gaps, lack of communication and trust regarding water knowledge (Enqvist and Ziervogel, 2019:2). Lastly, although Havekes *et al.*, (2013) and Rijswick *et al.*, (2014) conceptualise water knowledge and planning separately, it is the observation of the study that these processes should be carried out in parallel since information is constantly changing, and that plans should be adjusted accordingly.

b) Powerful administrative organisation of water management

Inequities and inequalities in water governance vary from place to place, region to region, and from one country to another, and at the same time, the administrative organisation of water management is not the same. This situation does not present a problematic scenario. Rather, it presents justice to the inherent contextual differences that will have led to these disparities. Nonetheless, there is always a need for the Water Service Authorities to have a sound or powerful administrative

organisation for water governance despite the contextual differences (Havekes *et al.*, 2013). While it may be true that there is no "one size fits all" approach in achieving social equity in water governance, it is also true that there are common aspects that should always be considered to inform whatever administrative organisation that is in place.

Among the principles of ensuring a sound or effective administrative organisation for water governance are the following aspects.

(i) *Clear allocation of administrative powers, authority*, *roles, and responsibilities in water services* (Folifac, 2007; Havekes *et al.*, 2013). Local authorities should be equipped with the right powers which will enable them to carry out their responsibilities. These include legal power, the power to set their regulations and the power to make informed decisions regarding water service provision in their jurisdiction. On the same note, the need for clearly defined roles and responsibilities should not be undermined. This was further articulated by Camkin and Neto's (2016:84) assertions that clearly defined roles and responsibilities that will pave the way for the once deprived groups from formal and informal water to enjoy both socio-economic and environmental benefits, including better access to water services.

(ii) Most importantly, one should always remember that imposing responsibilities is one thing, but *allocating powers* is relatively another. Therefore, there is a need to ensure that roles and responsibilities are associated with the right powers to ensure transparency, accountability and avoid mismatch of power and authority. If not, a situation that will result in service failure or inadequate delivery, as well as the denial of basic water rights to some people, will take precedence. The catastrophic mismatch of power can be further reflected in the case of Zimbabwe's urban councils, where there is a significant power imbalance between the central government and the local authorities. As a result, local governments have responsibilities but no authority, while the central government, through the Minister of Local Government and Public Works, has power but no accountability (Magaisa,

2020). Such a scenario has resulted in catastrophic and devastating consequences for service delivery.

(iii) *Sufficient administrative and organisation scale* is also vital to ensure well-equipped service is provided. This includes the measures and the capability to retain, attract, and motivate staff and ensure low turnover. This is crucial in water governance because one of the key issues faced by most Water Service Authorities is a shortage of employees and capabilities. Sufficient administrative and organisation scale is also critical as it will determine the governance of the Water Service Authorities (WSAs). This is due to the Water Service Authority's influence in establishing activities such as engagement, involvement, and capacity building, all of which are dependent on the Water Service Authority's strength. While defining the boundaries of a sufficient scale is challenging, what is clear is the fact that organisational fragmentation should always be avoided.

(iv) *Principles and values should guide a powerful administrative organisation for water management.* These aspects are normally neglected, yet they are a powerful tool in achieving social equity, efficiency, and sustainability in water governance. Principles such as environmental principles (e.g. the polluter pays principle), institutional principles (e.g. subsidiarity and decentralisation), and good governance principles (e.g. transparency and accountability) in water governance practices (Havekes *et al.*, 2013; Rijswick *et al.*, 2014) should be observed as they provide a guideline and a basis for making the decision that promotes the achievement of social equity. Values range from one place to another and from country to country; however, finding commonalities or shared values among those involved in water governance helps reach acceptable and legitimate solutions that can lead to successful implementation. Popular values that are significant and common worldwide in water management are solidarity, equity, human rights, justice, and trust, among others (Rijswick *et al.*, 2014). These principles and values aid in building public trust, accepting implemented programs by the communities, curb corruption and prohibit the misuse of the limited resources by both the officials and the communities, which can lead to improved access to water services. It is, however, important to note that for these principles and values to yield positive

results, they must be effectively implemented and practised. If they are just displayed and mentioned in theory, social equity will remain a dream that will never be achieved.

(v) *Lastly, a strong monitoring and evaluation system* should identify the gaps present in water governance dynamics. This will enable the identification of those who lack access and the reasons why they lack access. Specific measures to deal with certain inequalities and inequities will be implemented, and progress recorded will be crucial for assessing whether the implemented strategies are reducing the inequities or not (outcome equity). Monitoring and evaluation data is also useful for planning and may be utilized by donors and others when seeking funds for investments and infrastructure development (McGarry *et al.*, 2010; Havekes *et al.*, 2013; Bayu *et al.*, 2020). More so, monitoring and evaluation foster transparency and accountability in water governance, which helps establish procedural fairness and distributive justice. However, the most significant challenge in water governance is integrating the findings from governance monitoring into the development of sound and robust policies and addressing the water governance concerns such as social injustice and inequality in water service provision (Bayu *et al.*, 2020:2); and if monitoring efforts are well integrated with the policies, they can serve as the key to the achievement of social equity in water governance.

c) Policy, legislation, and regulation

Policies, legislation, and regulation provide an enabling environment that is necessary for development in water governance. Policy establishment is the initial step in ensuring that those who lack water services are recognised, and their needs are met. Therefore, to make informed judgments with all ideas on the table, current water governance necessitates participatory and decentralised approaches to policy creation. It does, however, caution policymakers to thoroughly examine excellent practices in other situations before implementing them (Folifac, 2007; Olagunju *et al.*, 2019) because water issues are context-dependent; what works in one situation may not work in another. Enabling legislation should also assist a country's water policy. This is critical for assisting with the implementation of water-related policies

and plans. Majzoub (2010:150) argues that water legislation should provide the legal frameworks for water governance, regulatory standards, institutional reform, and enforcement of regulations, among other things. The legislation must be administratively enforceable, socially accepted, and sensitive to a given context's legal, social, economic, political, and technological aspects.

While it is true that legislation empowers regulators, it is also true that overly legalistic and restrictive water governance legislation and rules are self-defeating. In support of this idea, the UN-Water (2019) contends that excessive regulation and rigid conformity to formal rules, which tend to coincide with bureaucratic inertia, can increase transaction costs, discourage investments, and potentially derail or hinder water management reforms UN-Water, 2019:3). On the other hand, simple water policy frameworks often clarify priority issues (Mohamed *et al.*, 2010:110) and achievable policy objectives. Therefore, there is a need to continuously update the legislations to ensure policy objectives are met. Most significantly, legislation backed by finance is required to assure execution; otherwise, failing to do so will simply complicate institutional governance as they seek to raise funds. The UN-Water (2019) report indicates that while these pro-poor measures are very common in policy formulation, a failure to apply the financial measure will hamper the aims to reduce disparities in water service provision (UN-Water, 2019:3). More importantly, there is a need to match the available resources and the responsibilities to escape the betrayal of over-ambitious policies, specifically in the water sector.

On the other hand, poorly designed and inadequately implemented policies, inefficient and improper use of financial resources, and policy gaps fuel the persistence of inequalities in access to safe drinking water and sanitation. Unless exclusion and inequality are explicitly and responsively addressed in both policy and practice, water interventions will continue to fall short of reaching the most vulnerable people who will benefit the most (UN-Water, 2019:19). As a result, the use of the Human Rights-Based Approach (HRBA) should be recognised in this regard. . The approach provides a critical perspective to examine specific groups lagging due to discrimination, unequal access to resources, and opportunities to

participate in decision-making. It can also help identify legal obligations and standards to guide potential actions and responses to ensure that the human rights to water and sanitation are fulfilled (UN-Water, 2019:36) during the policymaking process.

Lastly, ensuring consistency in the implementation of the policies to achieve social equity is vital, and yet this seems to be a challenge across the globe, as indicated by the UN Surveys. According to the United Nations Water Global Analysis of Sanitation and Drinking Water (GLAAS) report, only fifty-five (55) of the seventy-four nations that responded (74 percent) have plans and policies in place to extend water services to the poor. While this was the case, only 27% and 19% had specific financial measures set for their water services and sanitation, respectively and have consistently applied their plans and policies (Bayu *et al.,* 2020:2).

d) Participation

Central to water policy is the concept of participation (Zeitoun *et al.*, 2014:184). The term can be defined in a variety of ways, including involvement, consultation, outreach, and engagement, among others (Jimenez *et al.*, 2019:1). If social equity is to be realised in delivering basic water services, participation from government officials and public administrators, as well as other interested parties such as the impoverished and marginalised, is required. Authors like Fraser (2000) cited in Joy *et al.,* (2014) have established representation in the "trivalent conception of Justice", where there is recognition of the importance of participation in decision making to achieve social equity. Internationally, participation has also been endorsed in international agreements such as the 1992 Rio Conference on the management of water resources and basic water service provision, the 1992 Dublin principles (Zeitoun *et al.*, 2014) on Water and Sustainable development, and currently, the 2030 Sustainable Developmental Goals (SDGs) in which participation was also set as a 'Means of Implementation (MoI) to achieve universal access to basic water services (SDG 6) (Jimenez *et al.*, 2019:2). South Africa, for example, has long recognised the need for participation in attaining social equity in water governance. Section 195 of the 1996 Constitution of the Republic of South Africa (South Africa [Republic], 1996) and the adoption of *Bathlo Pele's* principles of consultation and

information (South Africa [Republic], 1997) represent not only the concept's acceptance but also the value placed on it.

In most specific terms, participation at the local government in South Africa has been emphasised through the implementation and recognition of various strategies such as the Project Consolidate, Project validating, Local Government Turn Around Strategy (LTGS), and the Back-to-Basics Approach to mention just a few. This is also known as state-based participation, in which the government establishes mechanisms and processes to ensure that the poor and the unreachable are included and heard. Effective and fruitful public participation in water governance can also be done in various ways, however as indicated by the World Bank (1996) in Garande and Dagg, (2005:420), forms of participation are highly influenced by the circumstances in which the action is being taken (Garande and Dagg, 2005:420). Participation can take the empowering form (Garande and Dagg, 2005:420) or capacity building (Folifac, 2007:7). These types of participation are people-centred and involve enhancing knowledge, capacity, and increasing confidence in society. As a result, it raises the public's awareness of water-related issues. The other form of participation is the mobilisation approach, which is planner-oriented, and participation is done after decisions have already been met (Garande and Dagg, 2005:420). Furthermore, participation can occur in partnerships, which induce empowerment and a sense of responsibility as the society feels ownership of the projects or decisions. Participation can also be achieved through social learning, according to Folifac (2007:7). He further argues that this form of participation is crucial in achieving equitable access to water by helping communities, individuals, and stakeholders to learn new skills that are needed to maximise their participation, ensure that their human rights are met, and protect their health. It enables interaction between citizens and experts, allowing them to understand the implications of their behaviours, attitudes, and institutional norms concerning achieving social equity in water governance (Folifac, 2007:17).

Although the importance of participation is widely recognised, certain conditions must be put in place in order for it to produce sustainable outcomes. This is supported by Jimenez *et al.,* (2019:2), who argued that" when participation does not

address entrenched power structures and the marginalised, it risks reinforcing and legitimising inequalities, but when it is free, meaningful and inclusive the improvements in sustainability and empowerment are significant". The current scenario in the South African Water Service Authorities can attest to this. Despite the initiatives mentioned earlier, evidence shows that participation is still done as a process of compliance rather than recognising the voice of the poor and marginalised. As a result, community protests for basic service delivery (including water services) become a space in which communities air their views (South Africa Human Rights Commission (SAHRC), 2018:33). It is also evident that the government has put less effort into evaluating its effectiveness in recognising the poor's voice. In the end, it is those that are already wealthy who are always served by the participation process (Ramjee *et al.*, 2011:14).

As a building block in water governance, it is important to understand how the legitimate forms of participation enable the reality in communities and the voice of the poor to be heard. There is a need for the Water Service Authorities and the local government to venture into the spaces of their communities to complement the top-bottom approaches such as the Imbizos and community broadcasts which are important but not enough to reach the marginalised groups (Weaver *et al.*, 2019:15). There is a need to have public administrators and council officials who perform participation for the sake of participation and not as a formality if social equity is to be achieved.

e) Financial management

As mentioned earlier in the policy and legislation aspect, failure to incorporate finance issues in water governance is a self-defeating process. McGarry *et al.*, (2010) reinforced this idea by emphasising the importance of linking financial management to policy. They argued that financial tools such as budgets should be policy sensitive (for instance, to the current SDGs and the National Development Plans) if equity, efficiency, and sustainability are achieved in water governance. According to OECD (2015b), emphasis should be placed on the allocation of financial resources (OECD, 2015b), making financial management a critical aspect of achieving social equity in water governance (Rijswick *et al.*, 2014). As a result,

careful considerations should be given from the sourcing of revenue up to the management of funds.

The challenges that South African Water Service Authorities are currently facing are that they have a limited revenue base and are heavily reliant on government grants. (Equitable Share and Municipal Infrastructure Grant). This is mainly because they cannot collect revenue from the communities they serve due to poverty, unemployment, and customer dissatisfaction, among other reasons. The current situation presents a barrier to recognizing social equity in water governance. This is also supported by McGarry *et al.*, (2010), who noted that there would be a need to supplement debt financing and user fees (as relying on these is unrealistic to achieve good sound water governance) with government and donor funding. In terms of the management of revenue, Auditor General [South Africa] reports indicate that irregularities in procurement for water projects, wasteful, and unauthorised expenditure in municipalities is deteriorating the situation in achieving water for all (AGSA, 2018:16) while the National Water and Sanitation Master Plan Call to Action Draft (2018) indicated that 41% of municipal water does not generate revenue, 35% is lost through leakage, and consequently, municipalities are losing about R9.9billion each year (Viljoen and Walt, 2018:1). This dire situation has far-reaching consequences, particularly for the poor and vulnerable, as they will be accidentally denied access to water services due to municipal financial constraints.

To ensure equitable access to water services, Water Service Authorities have to be financially sustainable; hence water governance should aim to secure sufficient water of appropriate quality at an affordable price (Khater *et al.*, 2013:50), ensuring that no one is left behind. Authors such as McGarry *et al.*,(2010); Havekes *et al.*, (2013); Rijswick *et al.*, (2014) are advocates of the use of cost recovery measures such as the solidarity principle (costs of water policy will be recovered from the national budget), the profit principle (costs covered with those who have interests and who profit from water services, they have to pay for it) and the international agreements (for instance polluter pays principle) to cover governance, maintenance, investments, and management costs without denying access to water services for

those who do not afford. On the other hand, the United Nations (2012) emphasised that Water Service Authorities should consider both tariff and non-tariff measures to guarantee that everyone is reached.

Lastly, although it is true that poor revenue generation and investment are impeding equitable access to water services for all, proponents such as WHO/UNICEF (2015) argue that if investments and financial resources are to be fruitful, especially in Africa, it is also necessary to address the underlying causes of water problems. . They argue that empirical evidence indicates that developing nations remain vulnerable, especially in the rural areas which experience low supplies of water at a global scale (Rodda *et al.*, 2016:456). A study conducted in the Arab in 2010 also asserts that despite huge investments in water services, the results have been disappointing or unsatisfactory because of the underlying institutional and legislative foundations (Majzoub, 2010:149). This is supported by Havekes *et al.*, (2013), who asserted that, for these suggestions to be effective, the local government has to be backed by the capacity and ability to implement them, which appears to be a major difficulty in most African countries.

f) Alternative service providers and innovation

Water Service Authorities (WSAs) and Water Service Providers (WSPs) all over the world face the same problem in ensuring equitable water service provision and other public amenities. They lack capacity (Mudombi and Montmasson-clair, 2020; Zvobgo, 2020), and as a result, the poor and vulnerable populations are not reached and will never have access to these public services. This is reflected in a study by Zvobgo *et al.,* (2020) in Chitungwiza municipality, which indicated that the situation at the municipality might lead to Day Zero in water service provision for the residents under its jurisdiction. Similarly, this is the case amongst South African municipalities, as indicated in the National Business Initiatives (NBI) 2017 report, which stated that about 80% of the South African municipalities are dysfunctional, not creditworthy, and operating at high risk (National Business Initiative, 2019). The Department of Water and Sanitation's (2014) Green Drop report also revealed that most Water Service Authorities in South Africa are not performing at optimal levels, and Mudombi and Montmasson-clair (2020) highlighted the difficulties created by the

state of infrastructure, which they described as ageing, badly maintained, and unable to meet current needs in water service provision. This dire situation has dramatic consequences on the poor and vulnerable especially during COVID 19 crises that has re-emphasised the importance of water in the survival of humans.

It is, therefore, critical to explore additional strategies such as Alternative Service Providers (ASPs) in water service provision considering the above evidence. This can be done by forming Public-Private-Partnerships (PPPs) to reduce the funding, technical and human resource gap while ensuring that more households have water services. At the same time, the role of the private sector has been contested by authors such as Dore *et al.*, (2012) in Homsy and Warner (2020:7) in their studies conducted in France and the United Kingdom, respectively, which indicated that privatisation of drinking water offered no efficiency advantages over public provision. Meanwhile, Homsy and Warner (2020:7) and Assaf (2010:97) suggested that privatisation does not automatically imply better or more cost-effective services, since corruption, rigid water regulations, inadequate data, political meddling, and a lack of appropriate laws will always stand in the way of achieving equity, efficiency, and sustainability. Furthermore, the 2010 Arab report on water governance indicated that the use of private organizations contradicts the goal of equity, and this might worsen the situation of those who have been disadvantaged (Assaf, 2010; McGarry *et al.*, 2010). However, the study argues that the role of the private sector in water service provision cannot be undermined. Governments alone cannot fully address financial, human, and technological capacity shortages, and as a result, water service provision will always be a concern. Therefore, the time has come to find a balance between social equity and efficiency. Measures such as using a light-handed regulation should be applied to allow flexibility and recognise problems faced by Alternative Service Providers (ASPs) (McGarry *et al.,* 2010) while ensuring that the poor and marginalized are not neglected. Furthermore, South Africa can also utilise Community-Based Organisations (CBOs) as Alternative Service Providers, especially in rural areas where most disparities exist. These are legally accepted in terms of the Water Service Act (No 108 of 1997) and other enabling legislation in water service

provision. Alternative Service Providers also influence innovation which is critical at this point in time in ensuring water service provision for all.

g) Capacity building

Capacity building is one of the major concerns in the water sector that requires more attention. As articulated by the OECD (2015b), capacity gaps should be identified and addressed, and these range from technical, financial, and institutional capacity in water governance. Furthermore, there is a need for building capacity in terms of human resources within water governance. These range from training the officials and empowering the communities through forms of participation such as social learning. This can also extend to other stakeholders involved in water governance to ensure they are familiar with water-related knowledge (Rodina *et al.*, 2017:207). As a result, informed decisions are made, and those who lack access can be informed of their rights concerning water access. In cases where the governing style requires one-way communication, the governments should ensure that they equip themselves and their agencies (through universities, academia, and research bodies) so that they will be in a position to make fair and just decisions that will ensure water to be accessed by all and leaving no one behind. It is therefore important to note that achieving social equity in water governance will be a challenge if skilled labour is lacking, if the staff is not satisfied, and if there is a lack of human resources to advocate for water issues at their local level, building and maintaining infrastructural services as well as fostering governance principles to ensure equity and justice in municipalities.

h) Resilience

The final aspect in this discussion points out there is a need for resilience in water governance, especially in the vulnerable contexts that are highly associated with high levels of poverty and inequalities like South Africa. Rodina *et al.,* (2017) proposed various approaches to incorporating resilience in water governance. These included the need to rethink transformation, engage with processual dynamics, the need to broaden the social dimension of resilience, measure equity and resilience, the role of situated knowledge, reliance in practice through improving the policy-science-civil society, and the need to embrace and navigate hydrological change in

complex systems (Rodina *et al.*, 2017). However, for resilience to be fruitful, it must be centred on the concepts of equity and justice. Otherwise, little will be achieved. Rodina *et al.,* (2017:11) further argued that there is more value in process-oriented notions of resilience as they are more useful in transitioning towards more sustainable, just, and resilient water features, a critical feature needed in contemporary water governance and universal access to water services. Empirical evidence already exists in applying the concept, for instance, in the eThekwini/Durban Resilience Strategy, which showed the incorporation of procedural equity through the efforts in transparency, participatory, and accessible principles adopted (Rodina *et al.*, 2017). While the study does not deny that the approach can be problematic, highly contextual, and influential, it is, however, a promising way to achieve equitable water governance when critically engaged.

1.13 WATER GOVERNANCE AND SOCIAL EQUITY IN SOUTH AFRICA

1.13.1 Role players involved in water governance

As is widely acknowledged, water governance is a collective action and shared responsibility of all parties involved. Thus, the responsibility of all actors is to help ensure its effectiveness (Camki and Neto, 2016:84). As an act involving too many interrelated players and its notion of being inclusive, it complicates the process and adds to the burden of the already many existing players in water management. Nonetheless, this is for the better because it contributes to the achievement of social equity by representing all groups, from the powerful to the powerless. In this regard, it is, therefore, crucial to clarify the roles and responsibilities of those involved and what is expected of them in the South African water governance system at the local level.

Moreover, the Water Governance Facility (2015) asserts that water governance is all about, who gets what water, when and how, and who has the right to water and related services, and their benefits, and these outcomes are determined by stakeholders' actions concerning the rules and roles that have been taken or assigned to them (UNDP-SIWI Water Governance Facility, 2015). It also asserts that establishing well-defined and coherent roles and responsibilities can pave the way to

achieve social equity, especially by the deprived groups and achieve sustainability and efficiency (UNDP-SIWI Water Governance Facility, 2015). In light of the above evidence, the following actors play a significant role in ensuring effective and equitable water governance in South Africa. Figure 2.6 presents an overview of water provision in South Africa.

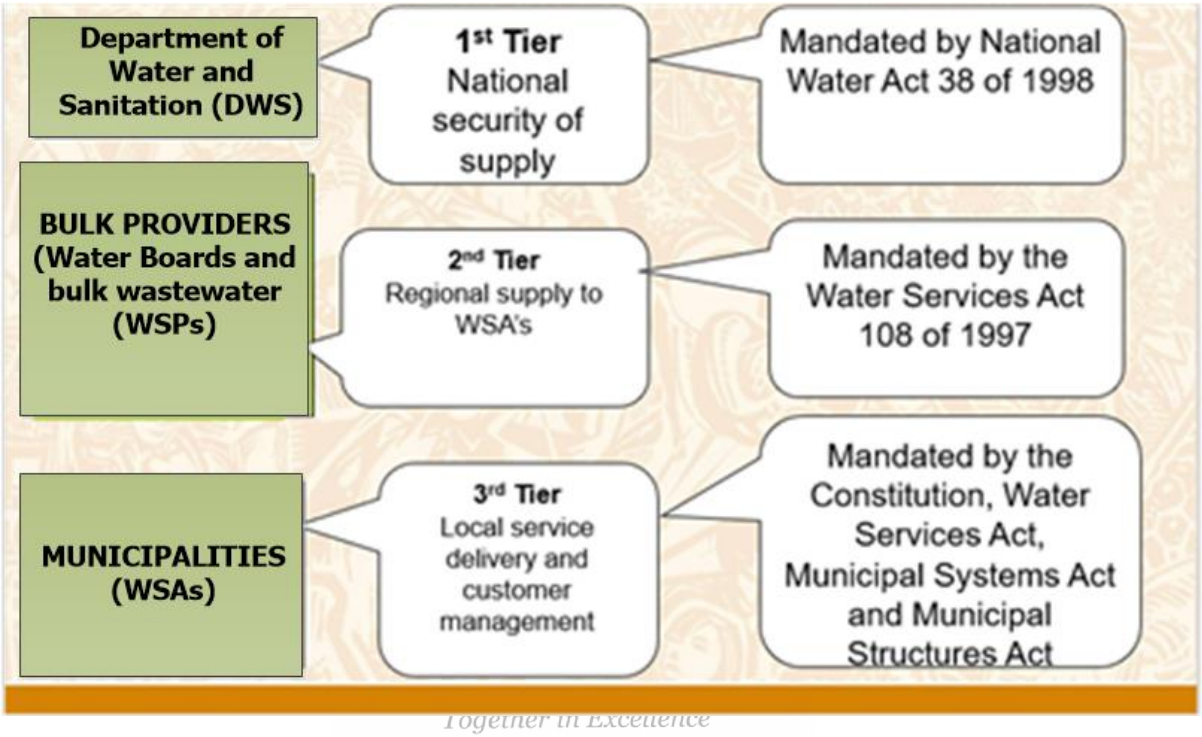


Figure 0.7: Overview of Water in South Africa

Source: SALGA, (2009:19)

a) Department of Water and Sanitation (DWS)

Department of Water and Sanitation forms the 1st tier, as guided by the National Water Act (Act No 38 of 1998) and has the primary mandate to develop and implement water-related policies. It performs the regulatory and oversight role in water service provision (Masindi and Duncker, 2016). While the Department of Water and Sanitation (DWS) focuses on making a positive impact on ensuring that there is efficient, sustainable, and equitable water service provision, it also focuses on investing in water infrastructure, improving planning, and protecting water resources in South Africa (Government Communication and Information Systems (GCIS), 2015; 2018; Makaya *et al.*, 2020). Since it is at the top of the hierarchy, the Department of Water and Sanitation plays a vital role in establishing social equity in water governance in South African municipalities. It acts as an enabler or barrier in

achieving universal access to water through oversight, monitoring, and regulatory role. However, the current state of the Department of Water and Sanitation is very disturbing in terms of its functions and performance and how it will impact water service provision. According to the Federation for a Sustainable Environment (2018) report, the department has a high turnover, high vacancy rate, and has intensified capacity constraints. The report further indicates that the department is facing serious financial mismanagement practices, it is faced with uncertainty issues (related to the proposed water and sanitation plan and the water proposed bill), and its weak monitoring and oversight role has resulted in poor performance compromising service delivery by municipalities (Federation for a Sustainable Environment (FSE), 2018). Such evidence indicates that the Department of Water and Sanitation (DWS) undermines its role to lead the Water Service Authorities and municipalities in South Africa, especially in ensuring that programs are successfully implemented and in performing its monitoring and oversight role.

b) Bulk Providers: Water Boards

Bulk providers include Water Boards, and they represent the 2nd tier. The primary responsibility of Water Boards is to supply water services (bulk potable and bulk wastewater on a commercial basis) to other water service institutions within their areas of jurisdiction (Folifac, 2007; Beck *et al.*, 2016). In some cases, they also provide retail water services on behalf of municipalities (Government Communication and Information Systems (GCIS),2015;2018). Depending on the circumstances, Water Boards may be required to amend their business plans to meet the requirements of the Water Service Act (No 108 of 1997). While it is true that Water Boards vary in size, capacity, customer mix, and revenue base, Masindi and Duncker (2016) argue that the current nine (9) Water Boards are performing well as compared to municipalities. They attribute this improved r performance to highly skilled municipal staff, raising funds to service debts, and building new infrastructure for future demands. As a result, infrastructure managed by Water Boards is highly maintained and is in a better state than that of municipalities. Currently, Water Boards are responsible for providing potable water to almost twenty-eight million

people (over half of the population) despite having the capacity to reach up to 39 000 000 (Masindi and Duncker, 2016).

c) Municipalities

Municipalities are also known as Water Service Authorities (WSAs) and are responsible for water service provision in terms of the Water Service Act (Act No 108 of 1997), the Constitution, the Local Government: Municipal Systems Act (Act No 32 of 2000) and Municipal Structures Act (Act No 117 of 1998). Forming the 3rd tier, municipalities manage most water-related infrastructure except for the bulk services provided by Water Boards (Masindi and Duncker, 2016) and are responsible for local service delivery and customer management. Water resource infrastructure such as boreholes and taps and bulk water supply schemes are under municipal operations. Most importantly, they provide water and sanitation to consumers, communities, households, businesses, and industries. While it is a constitutional mandate to ensure that these municipalities provide equitable water services (Republic of South Africa, 1996), about 80% of South African municipalities are operating at a higher risk and are dysfunctional (National Business Initiative, 2019). Weak governance, poor infrastructure, lack of financing, and poor monitoring and evaluation are some of the concerns that have widened the gap between the "haves" and the "have nots" and increased the disparities in water service provision within municipalities in South Africa (Masindi and Duncker, 2016). While the country's constitution promotes and encourages good governance principles to be adhered to in terms of provision of services, transparency and accountability still seem to be a huge challenge (Bruce, 2020) regarding the provision of water services in most South African municipalities.

d) Community-Based Organisations (CBOs)

Apart from the three-set tiers, South Africa also encourages Community-Based Organisations (CBOs) in water provision. By description, these are non-profit organisations that provide municipal services and act in the overall interest of the public within specific communities (Malau, 2002:7). The Water Service Act (Act No 108 of 1997) and other enabling legislation provide for the establishment of Community-Based Organisations (CBOs) to address challenges in basic water service provision, especially in rural communities through operating small water schemes

(Masindi and Duncker, 2016). However, studies were undertaken by the Department of Water Affairs (2001), the Mvula Trust (2008, 2009), DCoG, South African Local Government Association (SALGA), Water Research Commission (WRC), and other researchers indicate that the use of Community-Based Organisations (CBOs) in rural areas is limited (Goldman *et al.*, 2013) and abandoned (Socio-Economic Rights Institute of South Africa, 2018:27). Nevertheless, this also seems to be the norm across the world, as alluded to by Machado *et al.*, (2019) in a study carried out in Brazil and Ecuador (Machado *et al.*, 2019:1). Some of the reasons for these failures include legal constraints in the establishment of Community-Based Organisations (CBOs), lack of capacity in supporting decentralisation, political factors in which Community-Based Organisations (CBOs) are viewed as threats bringing political competition, and being undermined by lack of authority (Goldman *et al.*, 2013; Machado *et al.*, 2019; Tantoh *et al.*, 2019). While this is the situation on the ground, the role of Community-Based Organisations (CBOs) in achieving social equity cannot be undermined. Their specific nature of operating from the communities and at the grassroots level where the majority are vulnerable is critical in overcoming disparities in water service provision. This assertion resonates with a study carried out in Cameroon by Tantoh *et al.*, (2019), which observed that in the cases where Community-Based Organisations (CBOs) have been successful, they have enhanced community participation, empowerment, created a forum for involvement, and instilled a sense of responsibility within rural communities (Tantoh *et al.*, 2019). As a result, the services provided and programmes launched have gained respect, promoting economic efficiency and sustainability, but most significantly, it has created a platform where all opinions can be heard and negotiated. Likewise, South Africa's Department of Water and Sanitation encourages the participation of Community-Based Organisations and has committed to engage, support and assist these institutions in water service provision as reflected in the National Sanitation Policy position (South Africa Human Rights Commission (SAHRC), 2018:76).

e) Other role players

Other role-players that play a vital role in the achievement of social equity in South African water governance include any organisation providing water services, all

consumers and households using water services, all employees in these organisations and their related representative structures, education and training institutions, professional bodies, contractors, non-government organisations, the manufacturing industry, and other organisations involved in supporting activities such as research and development (for instance by Water Research Commission), training and education (Masindi and Duncker, 2016).

1.13.2 Water service delivery targets in South Africa

a) Basic water and sanitation targets

The Reconstruction Development Programme (RDP) was launched in 1994 with the goal of guaranteeing that by 2014, all South Africans will have access to functional basic water and sanitation services (Masindi and Duncker, 2016). The programme aimed to redress social inequities left by the apartheid legacy and eradicate the prominent backlogs in once owned black communities. While this programme did not fully achieve its objectives, it, however, managed to make some progress. It was also running in conjunction with the Millennium Development Goals (MDGs) of 2015.

b) Millennium Development Goals (MDGs) 2015

While reforming its water governance and water sector, South Africa committed itself to international declarations on sustainable water service development by adopting the United Nations General Assembly resolution on the Millennium Development Goals (MDGs) in 2000 (Masindi and Duncker, 2016). The Millennium Development Goals (MDGs) related to water service provision included halving the proportion of people who did not have sustainable access to safe drinking water and those who did not have access to basic sanitation by 2015 (Satterthwaite, 2016; Weststrate *et al.*, 2019) using 1994 as a base year. The Millennium Development Goals (MDGs) on water and sanitation were met in 2005 and 2008, respectively, in South Africa.

On the same note, the United Nations World Water Development Report of 2015 indicated that the Millennium Development Goals (MDGs) on water and sanitation

has already been surpassed (Conor, 2015). However, the authenticity of these statistics has been questioned regarding equitable water service provision. The Millennium Development Goals (MDGs) have been chastised for failing to address the issue of drinking water safety and quality (Weststrate *et al.*, 2019:800). Its definition of access is limited to "improved sources", and yet scholars such as Satterthwaite (2016) and Weststrate *et al.*, (2019) argue that "improved sources" do not imply "safe, quality and reliable" sources. A study on water quality evaluation in Cambodia found that the majority of rural cable pumped wells, which were considered improved sources, failed to meet health criteria (Weststrate *et al.*, 2019:800). A United Nations (2013) report also acknowledged that if safety and quality were considered indicators, the number of people without access to safe and drinking water might be two to three times higher than the official estimates (Satterthwaite, 2016:99). This evidence, therefore, highlights that while on paper there has been an improvement in access to water services, the reality on the ground indicates otherwise.

Nevertheless, the role played by the Millennium Development Goals (MDGs) cannot be undermined. This development initiative generated a high level of commitment towards the realisation of human rights with regard to water and sanitation by putting these services on the international agenda. This integration of the rights to water and sanitation in the Millennium Development Goals (MDGs) created a more inclusive and sustainable way while promoting equity, accountability and policy coherence in water and sanitation.

c) Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) were established through a rigorous consultation process involving civil society, citizens, scientists, academia, and the commercial sector from both global and national viewpoints. National consultative activities such as the My World survey led by the United Nations Development Group (UNDG) and specialised panels which were held provided the ground to facilitate intergovernmental discussions (Masindi and Duncker, 2016). This was done as part of the endeavour to build a new development agenda that is centred on people. Although the Sustainable Development Goals (SDGs) carried the momentum

generated by the Millennium Development Goals (MDGs) in 2015, a major improvement in water service provision is the recognition of the "Means of Implementation" (MoI), as noted by Machado *et al.*, (2019).

(i) *Sustainable Development Goal for Water and Sanitation (Goal No.6)*

In establishing the Sustainable Development Goals (SDGs) related to water and sanitation, a strong emphasis on the principle of "fairness of access" was made, pointing out the much looming problem of inequality that needs to be addressed. The Sustainable Development Goal of water and sanitation has been viewed as the central point of sustainable development with authors, such as Garrick *et al.,* (2017), noting the relationship between the Sustainable Development Goals (Goal No.6 and Goal No.10) while Bayu *et al.*, (2020) argued that these two targets are at the centre of Sustainable Development (Bayu *et al.,* 2020:2). Weststrate *et al.*, (2019:805) further assert that Sustainable Development Goals (SDGs) (Goal No.6) to water and sanitation comprise of various targets to address water quality and safety concerns raised during the Millennium Development Goals (MDGs). Capacity building, public engagement, and international cooperation are among the declarations of the Means of Implementation (MoI) of Sustainable Development Goals (SDGs) (Objective No. 6) and are critical in the success of the measures to accomplish this goal of universal access to water for all (Machado *et al.*, 2019).

The links between the water and sanitation targets were further elucidated by Hall *et al.*, (2018), as seen in Figure 2.7 below. They stated that capacity building and cooperation (SDG 6a) and local community engagement (SDG 6b) are concerned with the overall achievement of the overall goal (Goal No. 6), whereas the other targets are primarily concerned with the delivery of outcomes (Hall *et al.*, 2018:35). Furthermore, Hall *et al.,* (2018) noted that the relationship on these targets highlights the Integrated Water Resource Management (IWRM) (SDG 6.5) as the primary influencer of the targets with a significant impact on water efficiency (SDG 6.4) as well as the wellbeing of water-related ecosystems (SDG 6.6). While the authors highlighted that these targets are heavily influenced by water quality (SDG 6.3) as well as sanitation and personal hygiene (SDG 6.2), they also noted that water quality (SDG 6.3) was deemed to have a significant impact on drinking water

(SDG 6.1) with sanitation and hygiene also having an impact (SDG 2). As a result, the authors concluded that the main resulting goal of Sustainable Development Goal (Goal No 6) was safe, accessible, and affordable drinking water (SDG 6.1) as this enables health and wellbeing (SDG 3), which is the main intended outcome of all the 17 Sustainable Development Goals (SDGs). Their conclusion supports the views of Bayu *et al.,* (2020) and Garrick *et al.,* (2017), which asserted that water and sanitation targets are at the centre of Sustainable Development.

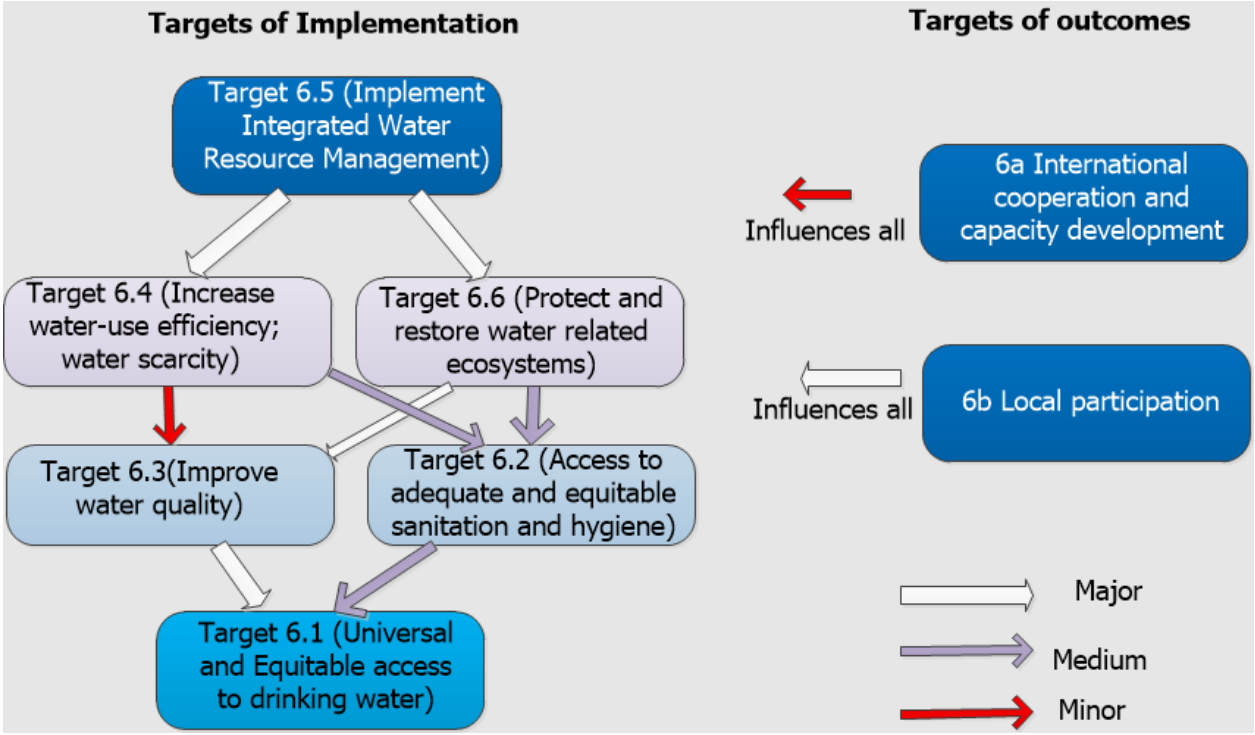


Figure 0.8: Relationship between water and sanitation targets (SDG 6)

Source: Hall *et al.*, (2018:35)

The role of water governance in achieving the aforementioned Sustainable Development Goals (SDGs) and targets can no longer be disputed. Rather, it is partially the key in addressing these water challenges of "too little, too much, and too polluted water" (OECD, 2015). Water governance also presents a chance for improved water policy design and implementation, and hence it is through equitable water governance that these targets will be achieved.

Furthermore, achieving the Sustainable Development Goals (SDGs) is vital, especially in these critical and challenging times of rapid urbanisation, depleting economic growth, climate change and rapid population growth accompanied by global

outbreaks and pandemics such as COVID 19. The depleting water resources and challenges of water quality presents a barrier to universal access. According to OECD projections, 40% of the population is already living in water-stressed conditions, while 240million are expected to remain without clean water in 2050 despite the efforts to tackle these shortages (International Institute for Sustainable Development (IISD), 2018). To ensure that these Sustainable Development Goals are achieved, the United Nations Development Programme (UNDP) and Water Research Commission (WRC) in South Africa have shown efforts to accelerate the rate at which the Sustainable Development Goals for water and sanitation (Goal No 6) progress is achieved and addressing South Africa's pressing water needs through research and innovation (United Nations Development Programme (UNDP), 2020).

1.14 THEORETICAL FRAMEWORK

The study is founded on theoretical foundations such as the Theory of Justice and the Human Rights-Based Approach (HRBA), both of which can be utilised to explain water governance and social equity. Both theories assume that resources/services considered essentials are those that one cannot live without and are critical for survival (Powers, 209:557). While there may be disagreements on such services, most theories agree that water, food, and shelter are considered essential services (also reflected in the Bill of Rights of the 1996 Constitution of the Republic of South Africa). They are critical for human survival. Therefore, there is a need to ensure social equity in their provisions basing on the theories of justice and the Human Rights-Based Approach (HRBA).

1.14.1 Theory of Justice

The study adopted Rawl's (1971) "Theory of Justice", which seeks equitability in opportunities and distribution and is rooted in the egalitarian view (Zeitoun *et al.*, 2014:181). Assuming an original position behind "the veil of ignorance" and relating justice as fairness, the theory proposes two principles for creating a just and fair society (Zeitoun *et al.*, 2014; Chung, 2018; Powers, 2019), thereby promoting social equity.

a) ***The principle of maximum equal basic liberties*** guarantees every person equal basic rights and liberties at their fair value (Chung, 2018; Powers, 2019). For policymakers in a functioning society with sufficient resources (such as a healthy economy with a constitutional government), this concept implies that citizens are given the same level of liberties, such as the right to vote and the right to be voted for (Zeitoun *et al.*, 2014) and freedom from starvation and neglect (water services). These basic rights and liberties are further clarified in Section 2 contained in the Bill of Rights in the 1996 Constitution in South Africa (Republic of South Africa, 1996). Rawl's 1971 publications on this idea emphasised that in a just and fair society, these fundamental rights and liberties could not be sold off for other valuable objectives. While he agreed that these liberties and rights could be restricted in a society to achieve a coherent scheme of liberties for all citizens, he pointed out that they cannot be taken away from a social group even if it promotes efficiency in the economy (Nnodim, 2020). This principle has lexical priority over the second principle, and it prioritises individual human rights over the demands of the political majority.

b) The second principle is divided into two parts in which the first principle takes precedence over the other. i) *The principle of Fair Equal Opportunity* regulates the institutions' operations that exist in a just and fair society. Political office advertisements, services distribution, and economic opportunities should be fair and ensure equal access for everyone. Full disclosure of information to the public is required in accessible languages and reachable modes (Chung, 2018; Nnodim, 2020).

ii) *The Difference Principle* allows inequalities to exist if those who are 'worst-off become 'better off' in society; hence it is deemed to be controversial (Chung, 2018; Nnodim, 2020). However, in support of Nnodim (2020), this study argues that the difference principle does not call for inequalities but rather acknowledges that social and economic disparities exist among citizens; hence it calls for ways to remedy these disparities. This argument is further solidified by Rawl's (1971) idea that society should be a collaboration in which burdens and benefits should be shared from the created relations. Under this theory, the society in which one is born and

social class should be seen as a matter of arbitrary contingency in which the adverse effects should be mitigated (Chung, 2020). Furthermore, the theory acknowledges that the unequal distribution of resources and talents will always remain present. However, in the case of these natural inequalities, social equity should provide possibilities for society to reconstruct itself in a way that benefits everyone, including the poor (Nnodim, 2020).

In light of the above arguments, the study argues that justice is at the centre of institutional morality in the water governance dynamics in the South African municipalities. As such, political, economic, and social institutions must pursue justice in the same way that other disciplines of rational and scientific inquiry pursue the truth in the provision of water services. In his theory, Rawls (1971) declares that justice is the first virtue in social institutions, just like the truth is in the systems thought (Nnodim, 2020). Furthermore, in a just and fair society, the legitimacy of institutions and social standards depends on their being freely and publically accepted by all those bound by them, a crucial element raised in contemporary water administration. Rawl's (1971) publications went on to define what he considered to be the main institutions in his theory, which included the political constitution, the private and governmental sectors, and civil society (Nnodim, 2020). This means that if social equity is to be achieved in water governance, the responsibility does not only lie with the state alone, rather it involves participation, cooperation, and collaboration of different actors in coming up with accepted policies and institutions which will be considered to create a fair and just society. As a result, free citizens with equal rights and liberties (not in the sense of acting in anyone's desire) should be able to control, revise and take responsibilities for their ends and desires by acting on reasonable and rational principles.

The theory was, however, criticised for its basis on the assumption of "original position" behind the veil of ignorance", arguing that it was a hypothetical state which will never be the reality and that the original position may also imply a limited base of knowledge, which will compromise the decision making process and outcomes (Chung, 2018; Mccain, 2018). Although this might be true, the study asserts that this assumption also enables the removal of self-interest-based policies and

procedures, reduces corruption, and promotes fairness in access to basic water services in South African municipalities. Other critics, such as Nozick (1974) in Nnodim (2020), criticised the *Difference principle* by arguing that it will stifle competition in a free market, and Chung (2018) argued that Rawl's (1971) assumptions were self-defeating as compared to the utilitarianism approach. However, this research argues that Rawls (1971) "Theory of Justice" recognises the poor, the marginalised, and those who lack basic services as active contributors in society. It advocates that these groups should not be seen as the unfortunate and unlucky objects to be treated out of pity and charity but "*those to whom reciprocity is owed as a matter of political justice among those who are free and equal citizens along with everyone else*" (O'neill, 2012:80). Thus, despite criticisms of the theory, the study attests that Rawls' (1971) works created the foundations for social justice theories and provided an opportunity to prioritise social equity in water governance.

1.14.2 Human Rights-Based Approach (HRBA)

The study also adopted the Human Rights-Based Approach (HRBA), which can be traced back to the notions of the 'natural right' that was put across by Aristotle and was later developed by other philosophers such as Thomas Aquinas, Thomas Hobbes (1651), Emmanuel Kant and John Locke (and others) in the 17th century (Heard, 1997; Hardwick, 2012; Powers, 2019). The theories of human rights emphasise the importance of water as a basic right that is critical for human survival. Powers (2019:557) refers to human rights as the most basic entitlements or claims which all individuals have against institutions of an organised state, and they are minimum demands of justice. The Human Rights-Based Approach (HRBA) has gained wide attention in the water policy since the 1992 Dublin Statement on Water and Sustainable Development and the Human Rights Approach in 2010 (on safe and clean drinking water), which both recognised clean water and sanitation as human rights (Zeitoun *et al.,* 2014; Powers, 2019). The Republic of South Africa's 1996 Constitution (Section 24 and 27) also recognises sufficient water and sanitation as a basic human right, which should be provided equitably, fairly, and with impartiality (Section 195) (South Africa [Republic], 1996).

Against this backdrop, the Human Rights-Based Approach (HRBA) advocates for non-discrimination and encourages active participation and representation of all groups (National Human Rights Institutions, 2015; Human Right 2 Water, 2021), specifically for those disadvantaged and lacking access. Furthermore, the approach overlaps with the principles of good governance such as accountability, transparency, participation, and legitimacy, which promote effective policy implementation, curb corruption, discourage abuse of power and ensure effective performance (UN-Water, 2019:4). These principles are a step toward creating fair water governance in the delivery of water services.

Another critical element of the Human Rights-Based Approach (HRBA) is that it places great focus on the poor and vulnerable and provides hands-on guidance for ensuring the identification of these groups, acknowledging them as owners of their development and analysing their contexts to fully understand who is left behind and why (Human Right 2 Water, 2021). Therefore, the Human Rights-Based Approach (HRBA) helps in building capacities of governing to fulfil the human rights obligations. As such, the approach integrates the norms, standards, and principles of human rights into plans, policies, and processes of water services development. Such integration provides a framework that contributes to understanding poverty as an injustice imposed on people and marginalisation, discrimination and exploitation as its central causes requiring corrective action (Borja-Vega and Kloeve, 2018).

While the Human Rights-Based Approach (HRBA) has been criticised for its basis of universalist claims of human rights (Heard, 1997; Hardwick, 2012), the study contests this notion in two ways; firstly, water is critical for human survival; hence it should be considered a human right which should be granted to everyone in a fair and just manner in Amathole District Municipality and all South African municipalities. Secondly, the Human Rights-Based Approach (HRBA) promotes efficiency and sustainability, both of which are critical for attaining social equity, as it recognises that the poor, marginalised, and those in need should not always receive free water (Miranda *et al.*, 2011:11). Alternatively, it advocates for the state to fulfil its Constitutional mandates of ensuring sufficient and affordable water service provision through different measures (such as subsidies, transferring costs to those

capable of paying). In turn, the Human Rights-Based Approach (HRBA) strengthens the capacity of both 'right holders' to make claims and 'duty-bearers to respond (Rammelt *et al.*, 2014:122). If the Human Rights-Based Approach (HRBA) is properly implemented, social equity will be achieved through these state obligations, measures, and support from other stakeholders in water governance.

1.14.2.1 Clarification of the misconceptions on the Human Rights-Based Approach

The Human Rights-Based Approach has faced various misconceptions regarding water and sanitation. As a result, the study found it critical to define what constitutes and does not constitute human rights to water.

First misconception: *The human right to water means that water must be free.* While proponents of the Human Rights-Based Approach (HRBA) argue that water should be for free and viewed as a legal privilege for humankind (Maramura, 2018:33), this is not necessarily true. Consequentially, water is now regarded as a commodity that should be distributed free of charge to anybody who is entitled to it. In clarifying this misconception, the Human Rights-Based Approach (HRBA) requires that water services be affordable to all. This implies that states must determine whether the public afford to pay for water services, and in cases where they do not afford them, measures should be put in place to ensure that water is provided to these groups. Measures adopted to address affordability concerns in water provision are entirely up to the state, and these may range from implementing free basic water or target subsidies, among others. Human rights law does not prescribe specific policy options but provides a framework for achieving desired outcomes (WaterAid, 2011:14). What matters is that everyone has affordable access to safe drinking water and sanitation.

Second misconception: *The human right to water and sanitation obliges the state to provide water themselves and prohibits private sector participation* (WaterAid, 2011; Human Right 2 Water, 2012). Given the persistent inequities in water service provision, the Human Rights-Based Approach has been perceived to prohibit the role of the private sector. However, this is a misconception since the law on human

rights only considers the impact on the enjoyment of these rights and does not take sides on the public vs private sector debate. Furthermore, the delegation of tasks, including privatisation, is in line with the right to water. Instead, the Human Rights-Based Approach calls for those responsible for water service provision to ensure that safe, acceptable, and affordable water services are provided for all without discrimination (WaterAid, 2011). Therefore, this approach calls for a strong regulatory framework for third parties to implement and monitor the impacts.

Third misconception: *The human right to water and sanitation means that everyone is entitled to a tap and flush toilet tomorrow*. The human rights component does not call for overnight solutions (WaterAid, 2011:14); rather, it calls for progressive realisation meaning that government, states and water institutions are obliged to take steps towards the full realisation of these rights. This obligation requires the government to identify the goals it is pursuing, necessitating the development of a vision and strategy to meet these goals. Thus, steps to achieve these targets should be fully laid out and communicated. Human rights are being realised in South Africa with a focus on the poor and vulnerable who were disadvantaged and denied access owing to the apartheid system.

Fourth misconception: *The human right allows for unlimited use of water*. The human right to water entitles everyone to enough water for personal and domestic purposes, and it must be realised in a sustainable manner for current and future generations (National Human Rights Institutions, 2015:40). However, in terms of numbers, General Comment No.15 does not specify how much water must be available, instead referring to WHO conformance. According to the World Health Organisation (WHO) guidelines, the daily water consumption for personal usage is set at 50-100 litres per person. However, these amounts vary greatly depending on each country's context and climatic conditions (National Human Rights Institutions, 2015:25); for instance, in South Africa, it is 25l per person/day.

1.15 LEGAL FRAMEWORK

Since 1994, various legal frameworks have been adopted to achieve social equity in water governance in South Africa. Most, if not all, have acknowledged that water services have been unfairly allocated and that there is a significant level of inequality

in water administration in one way or another. While the current legal framework has tried to address these disparities created by the apartheid regime through ensuring distributive and procedural justice in water governance, inequalities still persist. Therefore, this study contends that there is a need to understand the impact of the current legal framework in addressing these disparities and ensure that everyone is reached and has access to water services.

According to certain studies, South African water rules are not the issue. For instance, Naidoo (2018) strongly believes that the key to making things happen lies with people and that policy and legislations are just enablers (Naidoo, 2018). On the other hand, Muller (2018) suggested that the problems with resolving water issues are not due to the rules themselves but rather to their execution. Furthermore, Folifac (2007) attributes this gap to a lack of political will and commitment to moving resources in the right direction rather than the water laws (Folifac, 2007:6). While these arguments are true, the study argues that water laws still need to be revised and updated if policy objectives are to be reached. Furthermore, the researcher contends that if social equity and universal access are to be achieved, factors such as rapid population growth, climate change impacts, urbanization, and global and national disasters (such as COVID 19) must be taken into account and factored into water laws and water policy.

Thus, through policy evaluation, water laws will be critically analysed, and the reasons for poor implementation, lack of political will and reasons why resources are not moving in the right direction will be identified. Considering these factors in the existing laws will explain how laws are barriers or enablers in achieving social equity in South African water governance. The proposed framework in this study is to establish a water governance framework for social equity that will emphasize not only the revision of some policy provisions but also the necessity of implementation and the need for strong political will, as these are some of the more significant challenges in South Africa's water laws.

1.15.1 Key post-apartheid water governance policies and legislation

Water Service Policy (White Paper) 1994. The White Paper attempted to solve the backlogs in water service provision that existed prior to 1994 as a result of racial segregation and discrimination. Its purpose was to establish the organisations and methods that would be required to address the backlogs. It recognised the economic value of water, the human right to water, and it included principles such as "some for all rather than all for some" (Hollingworth *et al.*, 2011:10). As such, the paper addressed inequity and disparities in the allocation of water resources and supply development (Beck *et al.*, 2016:4)

The Constitution of the Republic of South Africa, 1996. In terms of Chapter 2 (Bill of Rights), all South Africans are entitled to sufficient food and water (Section 27) and a safe environment (Section 24) (Republic of South Africa, 1996; Beck *et al.*, 2016). Thus by recognising these basic human rights, the state is duty-bound to ensure sufficient water service provision through the use of legislature and other necessary measures (Madigele, 2017). Moreover, the Constitution also sets water service provision as a municipal competence in terms of Schedule 5 Part B, in which the municipalities (Water Service Authorities) should provide water services in a fair and just manner (Section 195). Most importantly, in terms of Section 153, municipalities have the power to manage and structure their administration systems as well as the processes involved to give priority to the basic needs of the community (RSA, 1996), and this should be done with adherence to the principles and values of public administration specified in terms of Section 195. Therefore, the 1996 Constitution of the Republic of South Africa provided for the legal basis for Water Service Authorities and those involved in water service provision at the local level to ensure the realisation of human rights to water services (Section 24 and 27) in an equitable, just and fair manner (Section 195). It granted the responsible institutions the power (Section 153) to make decisions regarding their water governance.

The Water Service Act (108 of 1997). The Water Service Act (Act No 108 of 1997) regulates and provides for the right of access to basic water services necessary to secure sufficient water and a safe environment (Republic of South Africa, 1997; Muller, 2018). Furthermore, the Act includes guidelines and regulations governing

municipalities in the provision of water and sanitation (Adom and Simatele, 2021:508); it specifies the setting of national standards and norms [Section 2(b)], the preparation and adoption of Water Services Development Plans (WSDPs) by Water Service Authorities [Section 2(c)], and the promotion of effective water resource management and conservation [Section 2(j)] (Masindi and Duncker, 2016). It puts the Department of Water and Sanitation as the main authority responsible for policy development, implementation, regulation, monitoring, enforcement, and administration. The Act legally sets municipalities as Water Service Authorities (WSAs) responsible for providing basic water services and sanitation (Enqvist and Ziervogel, 2019:5). Although water governance is a complex matter involving too many interrelated players, municipalities in terms of this Act have the responsibility to coordinate, administer, implement, and make water-related issues. They have to practice distributive and procedural fairness in their practices if social equity is to be attained. They have the power to include other stakeholders, coordinate and ensure the integration of various actors in their water governance dynamics.

The Act allows the reallocation of water to meet those in need, gives the minister powers to monitor and make public the water levels, and establish strategies for dealing with shortages. Unfortunately, South Africa has shown challenges in implementing the Act, and as a result, the vulnerable and marginalised are always at the risk of continuing without water. The Cape Town Day Zero in 2018, where dams almost ran dry in the first half of the year, is an example that has been proven that despite what the law says, implementation still lacks behind (Enqvist and Ziervogel, 2019:6). Muller (2018) purports that many watercourses are polluted, poorly managed, unlicensed, and unsupervised, and these will always widen the gap between policy and reality. In support of this view, Folifac (2007:9) further argues that even though the Act spells out the role of the Department of Water and Sanitation (DWS) in the case of non-performance by the local and provincial governments (Folifac, 2007:9); however, reality suggests that little is being done to ensure that people who lack access are catered for as a result of local government failings. While authors like Muller (2018), Naidoo (2020), and Folifac (2007) considers the problem with water policy to be one of implementation, Calfucoy *et al.,* (2009:2) identified the weakness of the Water Service Act itself. He argued that

while the document charges municipalities with basic water service provision, it did not establish strict implementation timelines for municipalities to follow; rather, it provided a guideline on pricing techniques for basic water provision (Calfucoy *et al.*, 2009:2). As a result, some populations will always be lagging in access to water services, whether the fault is with the law or with its implementation. Thus, the policy must be reviewed to ensure that its objectives are met.

The National Water Act (No 36 of 1998). The National Water Act was enacted as part of the water sector reforms to fundamentally reform the previous Water Act of 1956, which was based on racism and discrimination and was based on European water-rich legislation, which was not suitable for a water-scarce country like South Africa in water allocation. At the centre of the National Water Act lies the principles of equity and sustainability, and as such, the government assumed the role of custodian of water resources, and the minister of water and sanitation is responsible for ensuring that water is handled in a way that benefits everyone (Republic of South Africa, 1998). The National Water Act (No 36 of 1998) ensures that water resources are protected, used, developed, conserved, managed, and controlled in a sustainable, efficient, and equitable manner by establishing suitable institutions (Masindi and Duncker, 2016). By allowing institutions like Catchment Management Agencies (CMAs), Water User Associations (WUAs), and water advisory bodies to carry out international water agreements, The National Water Act envisages a decentralised institutional structure where local and regional communities are intricately involved in managing water resources in their respective areas (Toxopeüs, 2019). It sought to support more equitable service delivery in the water allocation rights of the black people by requiring community participation in water management and water service development. The Act provides guidelines on what should be done and how the country should manage the impacts of external factors such as climate change and the growing population, stipulating different tiers of government, procedures to be taken, and what users must do to address particular problems being faced (Muller, 2018:8).

Although the Act was aimed at ensuring equity through shifting water control and management from a riparian system to a system that suits public interest (Adom and

Simatele, 2021:508), it also introduced formal requirements for water conservation and demand management, which indirectly impacted the disadvantaged communities negatively (Enqvist and Ziervogel, 2019:5). The National Water Act has not been fully or successfully implemented to date. The challenges raised regarding its implementation are related to technical capacity issues, lack of skills, financial and human resources in the department, and weaknesses in accountability (The Water Wheel, 2013:39). Furthermore, a dependency syndrome coupled with the fact that the white minority still holds power over the black South Africans has led to inequities. As a result, recognising the policy's intended objectives seems far-fetched. In support of this notion, Madigele (2017) also asserts that the Act has achieved minimum substantive progress in realising its objective of equitable water allocation across all races regardless of gender and location despite possessing equity as the core principle (Madigele, 2017).

Strategic Framework for Water Services (SFWS) (2003). This framework caters for an inclusive policy on water services that sets goals for access to services, education, health, free basic services, and institutional development and performance (Masindi and Duncker, 2016). Apart from defining the tasks of the Water Services Authorities (WSAs) and Water Services Providers (WSPs), its emphasis on the provision of infrastructure, promotion of health and hygiene, and the need for maintenance of basic services by Water Service Authorities is vital in achieving social equity in water governance (Beck *et al.*, 2016). The framework also proposes a 10-year vision for water services, setting out the planning (through WSDP), policy, financial, regulatory, and institutional frameworks informed by relevant Integrated Development Plans (IDPs). Most importantly, it emphasises that these frameworks should protect consumers and public interest, including the disadvantaged and vulnerable that are lacking access to water service provision. Therefore, the framework attempts to reaffirm the constitutional responsibility of the municipalities to provide water services as stipulated by the Municipal Systems Act (MSA) (Act No 32 of 2000) and ensure the progressive realisation of these rights (Beck *et al.*, 2016:5).

Free Basic Water Service Policy 2001. The indigent policy was passed in 2001 by the South African government to ensure equal service delivery. Through the Free Basic Water Service policy, Water Service Authorities have been tasked with the mandate of providing 25*litres* per person or 6000 *kilolitres* for a household of eight per month at no cost to end-users accessible within a distance of 200m from their homes, available 350 days and uninterrupted for less than 48 consecutive hours per supply per incident (Folifac, 2007; Rhodes and Mckenzie, 2018; Enqvist and Ziervogel, 2019). The policy is also meant to ensure free basic sanitation (government subsidy for a Ventilated Improved Pit (VIP) toilet). While this is the case, the Free Basic Service policy maintains that the government has committed to supporting a 50-litre-per-day increase, leaving municipalities to operate within their means. This revision was made in 2007 to ensure improved access to water infrastructure by the poor while maintaining access through sustainable operations (Beck *et al.*, 2016:2).

Although this policy has led to improved access to water service provision, it has been heavily criticised for its failure to reach the most vulnerable communities and households. Analysts such as Modell and Leatt (n.d), as cited in Muller (2008:80), argued that "There are substantial inclusion errors in the free basic water programme. Of the 32 million people who received free basic water in May 2005, only 17 million were considered poor by the Department of Provincial and Local Government (DPLG)…. On the other hand, significant numbers of poor people are excluded from receipt of free basic water." Furthermore, Tissington *et al.,* (2008) argued that the use of indigent policy to allocate Free Basic Service to the poor is flawed because those targeted are failing to register as indigent for fear of discrimination, stigmatisation, and lack of awareness (Tissington *et al.,* 2008:4). As a consequence, the poor and marginalised groups are under-represented on the register; hence they end up not being reached by the programme. Thus, much needs to be done to create awareness of this programme to ensure that the most vulnerable are reached. Failure to reach the targeted groups that are marginalised and vulnerable not only impedes the achievement of social equity in water governance but also means human rights are compromised.

National Water Resources Strategy (NWRS) of 2004 (1) and 2013 (2). The National Water Resource Strategy (NWRS) of 2004 is the first edition of the National Water Resource Strategy and is seen as a vital legal instrument in implementing and operationalising the National Water Act (Act No 36 of 1998). This strategy is binding to all institutions implementing the National Water Act and provides the framework for the protection, use, development, conservation and control of water resources for South Africa. One of the essential aspects of the National Water Resource Strategy (1) was that it allowed the Department of Water and Sanitation to focus on monitoring, regulation, and policymaking rather than its present numerous functions as an operator, developer, and regulator. As such, the strategy calls for decentralisation of water resource management to Catchment Management Agencies (CMAs) and Water User Associations (WUAs) at the local level. Lastly, the strategy provided a platform for collaboration and cooperation within the three spheres of government involved in economic development (Adom and Simatele, 2021:509).

The *National Water Resource Strategy (2)* was focused on achieving sustainability and equitable access to water by South Africans. It recognised and explained the importance of the support provided by water in alleviating poverty and promoting development, economic growth, job creation, and how it contributes to the economy at large (Government Communication and Information Systems (GCIS), 2015; Beck *et al.*, 2016). The approach clearly defines equity in water access as providing high-quality, dependable water to a diverse range of society's consumers. (Madigele, 2017). In addition, Masindi and Duncker (2016) further assert that the National Water Resource Strategy (2) provides a way to achieve the national priorities of improving equity in access to water services in South Africa. While the National Water Resource Strategy (2) has shown to be promising in the achievement of equity, the Department of Water Affairs pointed out that South Africa still has a significant population that still lacks access to reliable water supplies and remains water insecure despite the financial and infrastructural investment that has enabled the provision of water supply in the economy (Madigele, 2017).

1.15.2 Legal framework for governance of water services by municipalities

The Municipal Demarcation Board (1998) provides a legal framework for defining and implementing a past transitional local government. The Act determines municipal boundaries and leaves no part of South Africa outside the municipality's jurisdiction; thus, there is parity and equity in entitlements of services. According to this Act, there are currently 257 municipalities in South Africa. The prerogative of the Act is to give the power to restructure or amalgamate dysfunctional municipalities into functional ones to improve municipalities' economic, social, administrative, and financial sustainability (Municipal Demarcation Board, 2018; Grafton *et al.*, 2019). Considerations on income levels, which will determine the financial viability of municipalities, geographical boundaries and sizes, which will determine the availability of services ranging from infrastructural developments to human and technical capacity, are taken into account when municipalities are restructured and amalgamated, and when the MDB defines boundaries and jurisdictions (Municipal Demarcation Board, 2018). Therefore, the study observed that the Act plays a crucial role in determining the achievement of both procedural and distributive justice in water governance.

The Local Government: Municipal Structures Act (Act 117 of 1998) and the subsequently amended Act *(Act No 33 of 2000)*. The Acts establishes that water service provision should be a function of district municipalities in non-metropolitan areas unless the minister makes authorisations of the function to local municipalities. Apart from giving effect to Section 155 of the Constitution of 1996, which classifies the municipalities into three categories (local, district and metropolitan), the Act also specifies the powers and functions between these categories. However, variances have emerged within the nine provinces as a result of this provision. In some cases, water services are provided at the district level and local level. However, this has created inconsistency, poor coordination, conflicts, and a lack of accountability between the district and local municipalities, resulting in poor service delivery of water services in some instances. Furthermore, the Act defines municipal councils' operational and functional requirements and sets out the internal structures and functionaries within municipalities (Toxopeüs, 2019). In addition, the Act also

specifies the establishment of Community-Based Organisations in Section 78, which is one of the mechanisms intended to improve water service provision, especially in remote and rural areas.

The Local Government: Municipal Systems Act (Act No 32 of 2000) explains the key rules that must be followed in order to gain access to basic service providers such as water. It makes provisions on how municipalities should operate and partnerships that they can enter into in order to ensure that water is accessed equitably. Moreover, the Act further gives clarity on the internal operations of municipalities in addressing local government objectives. Community participation and integrated development, as well as infrastructure for municipal services, are all addressed. Section 78 of the Municipal Systems Act has a significant impact on water service provision since it requires municipalities to go through a rigorous process before allowing an institution to provide municipal services such as water (Toxopeüs, 2019).

Municipal Finance Management Act (Act 56 of 2003) regulates finances in the local government sphere. The Public Finance Management Act (PFMA) controls financial matters in terms of other government entities involved in water service provision. Municipalities are mandated to establish Integrated Development Plans in terms of the Municipal Systems Act (No 32 of 2000), which will later serve as a model for municipal budgeting processes. In terms of this Act, municipalities set tariffs for their services, and in doing so, there is a need to incorporate those who lack access because of affordability concerns. However, it is imperative that municipalities should ensure financial sustainability while balancing equity and efficiency.

1.16 REVIEW OF EMPIRICAL RELATED LITERATURE

This section provides a substantial amount of literature demonstrating that water governance research is not new nor unique. Instead, it contends that the phenomenon under study has been explored at the local, national, regional and global levels. Furthermore, the section highlights that advances have been made to incorporate social equity and ensure equitable water service provision in water governance. While some studies have successfully established water governance frameworks, the incorporation of social equity as the key aspect is still limited, even

though it is a crucial element in ensuring access to water by everyone. In addition, no known study in the Amathole District Municipality has developed a water governance framework for social equity. This is imperative in ensuring the achievement of social equity. Most importantly, this is because water-related concerns are context-specific and place-based, necessitating an understanding of local realities and the formulation of a framework for a specific setting.

1.16.1 Water governance and social equity

a) Global level

On a worldwide scale, investigations conducted in Brazil by Haglund (2014) revealed that some communities are turning to the law and courts to resolve water disputes. The study sought to elucidate the legal and moral content of water policy adjudication and evaluate the ability of law and courts to promote multiple core principles, including social and ecological justice and human rights, when dealing with water service challenges. In doing so, Haglund (2014) argued that justice principles bring new ideas and logic in water governance, and it opens up new possibilities for accountability and leads to greater scrutiny of inequality (Haglund, 2014:79). In his conclusion, he highlighted that democratisation has resulted in the creation of new legal mechanisms that promote Brazilian citizens' human rights, as well as the prioritisation of new public administration logic. Moreover, the court system has provided new reforms to promote transparency, historical question domination and destructive development practise forcing administrators to justify their practices. In light of this, The study also pointed out the dangers of relying solely on legal mechanisms to address water policy flaws, stating that law is not a panacea, it is not designed as a planning device, and poor communities' legal empowerment is limited (Haglund, 2014:90), leaving them at a disadvantage when fighting battles and conflicts over water service provision.

Balazs and Lubell (2014) found that social learning is the key to accomplishing procedural and distributive justice environmental goals in water governance in a study conducted in California. They argued that social learning widens stakeholder participation, increases information, and develops initial foundations for structural

changes to water governance. Furthermore, the study found that social learning can help to improve water governance results by increasing the representation of traditionally marginalized groups who lack access to water and the issues they encounter. The findings of Balazs and Lubell (2014) in the Mekong Region were reinforced by Dore (2014), who investigated how justice may be attained in water governance. However, Dore's (2014) conclusions broaden the learning approach even more by proposing the new frontier of constructive engagement in deliberative governance in water governance through promoting inclusivity, learning, critical analysis and institutional building whilst being accountable, respecting rights and fairly distributing rewards and risks. Dore (2014) argued that deliberative governance needs to be attractive to proponents of fairness, effectiveness, social justice and their consequence decisions and impacts.

In his paper, 'Ethics and Equity in Water Governance', Doorn (2012) derived three important questions in water governance: (i) distribution of risks, (ii) distribution of scarce resources, and (iii) distribution of responsibilities (Doorn, 2012). For these questions to be fully answered, he concluded that philosophers need to engage in multidisciplinary approaches and incorporate water ethics in water governance. Doorn (2012) argued that this would allow for a thorough examination of the concepts of equity, justice, and democracy, resulting in the formulation of specific and practical moral principles for water governance.

b) Regional level

Regional studies have also been conducted, demonstrating that challenges of water governance and social equity extend beyond the local and national levels. This is highlighted in a study carried out in the Southern African region by Rodina *et al.*, (2017). The aforementioned study proposed the use of resilience thinking to address water challenges. In doing so, seven approaches to resilience in water provision were proposed, and these mainly include the need to rethink transformation, engage with processual dynamics, the need to broaden the social dimension of resilience, measuring equity and resilience, the role of situated knowledge, reliance in practise through improving the policy-science-civil society and the need to embrace and navigate hydrological change in complex systems. While Rodina *et al., (*2017)

advocated for resilience in water governance, they also warn that resilience needs to be informed with social equity and justice challenges. They further argued that failure to do so might result in resilience-building efforts deepening the existing inequalities and destabilising ongoing efforts to build more inclusive and just societies. Therefore, Rodina *et al.* (2017) recommended researchers and practitioners to engage resilience with a primary focus on equity and justice. The study's conclusions recommended that resilience should be considered a stop or pathway in water governance, a process that includes democratisation of policymaking and the decision-making process, which has its deep roots in citizen engagement within these processes.

In their study on water governance in Africa, Olagunju *et al.*, (2019) provided a thorough systematic review of existing water governance studies that were considered lacking. They articulated research gaps, progress, and challenges on water governance in the context of the African continent, arguing that it enables the emergence of context-specific knowledge. Their review also played a crucial role in stimulating conversations on inter-jurisdictional similarities and disparities in trends and challenges in the African continent and ultimately uncovered transferable ideas for policy development and water research internationally (Olagunju *et al.*, 2019:383). In their conclusions, Olagunju *et al.*, (2019) recognised that water governance opportunities and challenges differ across the continent and that there is a need for enhanced capacity, innovation, collaboration, inclusivity and proactive approaches, as well as targeted research investments in order to promote water governance (Olagunju *et al.*, 2019:400).

c) National level

At the national level, in a study conducted in Johannesburg (Alexandra and Soweto) by Nastar and Ramasar (2012), they found that access to water has improved in Johannesburg. However, there is still unequal distribution in terms of access. Therefore, the study concluded that poor urban communities living in informal settlements and former townships have a much lower quality of water supply when compared to those residing in wealthier areas. Different payment mechanisms are still used to preserve inequity. However, the study was mainly focused on power

transitions and the importance of niche groups in influencing water governance in South Africa. The study concluded that additional room for political components to be developed is needed to fully represent the dynamics of social development. On the same note, Mudombi (2020) argued that water service issues in South Africa remain intricately tied to social equity, and access to these services is not equitable. He suggested the need for greater cooperation between the national government and the municipalities, arguing that they have a crucial role in providing infrastructure and services, given the historical background associated with high levels of discrimination and exclusion (Mudombi, 2020:3). Nonetheless, his paper used an analytical approach that entails using descriptive statistics to unpack the gaps in water governance. Mudombi's (2020) paper was focused on providing an in-depth assessment regarding the progress made in water services provision. In order to improve water governance, he proposed a renewed effort towards universal access to water if social equity is to be achieved in South Africa.

Analysing how power asymmetries affect water governance actors and the outcomes, Forster *et al.,* (2017) assessed the Water User Association (WUA) establishment in the North West Province of South Africa. According to the study, the new water policy attempted to reduce social inequities by establishing Water User Associations as a legal, institutional vehicle for collaborative water governance. Since implementing a water policy has proven to be a challenge in South Africa, their findings have societal relevance in assisting this implementation. According to this study, these Water User Associations were meant by policy to decentralise water to the bottom level and improve water service access. In essence, the obstacles revealed in this study are not only relevant for policy implementation but also indicate the failure of national policies to reduce inequity. In their findings, Forster *et al.,* (2017) noted that the establishment of the Water User Association (WUA) was flawed, and as a result, the inclusivity in decision making, which was meant to recognise the needs and the voice of the poor and the marginalised, was not achieved. The study concluded by noting that water governance in South Africa needs to strengthen agential powers at all levels, paying attention to procedural rules by agents as this is important to those who have been targeted by the new

water policy (the historically disadvantaged and marginalized). Lastly, the study recommended that on top of the agential deficits in human and financial resources, the Department of Water and Sanitation also needs to develop capabilities and resources for collaborative governance to be successful (Förster *et al.*, 2017:532).

Another study on water governance and social justice worth mentioning are Enqvist and Ziervogel (2019), who conducted research in Cape Town, South Africa. In the first half of 2018, 4 million households were threatened with being cut off from water supplies (endangered by Day Zero) when water sources (such as dams) nearly ran dry. The study depicted that Cape Town Day Zero was partially attributed to a lack of trust and poor communication within the City's water governance. There were indications that the city is marked by extreme inequities in water service provision, with the underprivileged and marginalised being the most susceptible and vulnerable. While the study highlighted that winter rains saved the city, it also indicated that exploring additional water sources and developing new strategies were already in motion as part of the response mechanism by the city. Therefore, recommendations were made regarding the necessity to recognise the effects of these threats as well as the city's reaction to the population (still defined by extreme inequality). Enqvist and Ziervogel (2019) came to the same conclusion as Olagunju *et al.*, (2019) that water governance must be inclusive and involve collaboration across sectors and scales. Most importantly, the study emphasised the need for governance to account for development in the efforts of promoting water justice in water governance (Enqvist and Ziervogel, 2019:12).

While the study in Cape Town partially supports the notion that most Day Zero scenarios are associated with climatological deficits (Zvobgo *et al.*, 2020:2), a study carried out in Chitungwiza; Zimbabwe presented a contradicting view. It indicated that Day Zero in Chitungwiza Local Municipality is more likely to emerge from the lack of municipal capacity to deliver sustainable and reliable water services than the interruption of services due to climatic conditions and droughts (Zvobgo *et al.*, 2020:2). These conclusions were reached after it was discovered that the municipality had failed to meet the needs of the majority of its households (80%) due to lack of investment, high non-revenue water, and poor infrastructure

maintenance, which resulted in poor quality and unreliable water service provision. While the communities in Chitungwiza Local Municipality have resorted to new sources such as wells and boreholes as a solution, the paper recommended that there is a need for the municipality to implement structural reforms that will enhance water service provision, foster transparency, accountability and end corruption (Zvobgo *et al.*, 2020:10) to improve water service provision. While these studies were made in Zimbabwe, they are representative of what happens in most South African municipalities, including the Amathole District Municipality. These assertions were further noted by the National Business Initiative (2019) report, which indicated that about 80% of South African municipalities are operating at high risk, with limited capacity and poor infrastructure; they are poorly governed, and they are faced with financial management challenges. This situation has been further worsened by the current COVID 19 pandemic, which has resulted in a decrease in income and an increase in the amount of unpaid water used. Apart from the fact that water losses and leakages have been posing challenges (Mudombi, 2020:13), this situation will most likely make the vulnerable and poor communities experience their Day Zero because of the current state presented by the Water Service Authorities.

Using lessons learnt from South Africa, Folifac (2007) concluded that despite the new water policy that has been adopted in the water sector to curb water challenges, there is still a lack of political will in policy implementation and the movement of resources in the right direction (Folifac, 2007:19). He argued that policy alone is not enough to address these challenges. Instead, it should be backed by actions if success is to be achieved. Folifac (2007) further argued that at the core model of water supply services (policy, administration, and institutional reforms), there should be a strong political commitment embodied in good water governance such as public participation, accountability, monitoring and evaluation and management review. His findings complement those of Doczi *et al.*, (2013), who observed that one of the major challenges to universal access is a lack of political will, and where there has been political will, it has not yet manifested on the ground to illustrate the impacts. The study further argued that to achieve the Sustainable Development Goals for 2030, there is a need for a holistic view of the water sector,

giving attention to both the quality and quantity of water services. Having highlighted financial challenges in water services provision, Doczi *et al.*, (2013) recommended that focus should be put on seeing more equitable and efficient ways and better-governed finance coupled with qualified and motivated practitioners, especially at the local level if universal access in water service provision is to be met.

1.16.2 Existing water governance frameworks

While the studies above demonstrated that water governance and social equity are not new or unique, they failed to establish water governance frameworks. Therefore, this section presents studies that have successfully developed water governance frameworks. The section examines the strengths and weaknesses of each framework in achieving social equity, as well as the problems posed by water-related concerns in the existing established frameworks. Lastly, the need for a water governance framework for social equity in the Amathole District Municipality is established.

a) Water sensitive urban design framework

Fisher-jeffes *et al.*, (2017) focused on the urban difficulties that South African water service providers face. Their study proposed implementing a Water Sensitive Urban Design (WSUD), a systems-based approach that focuses on the interactions between the built form and water resource management approach for urban water. This framework comprises of four components (research, vision, narrative, and implementation) that can be applied in urban contexts while enabling the transition towards water sensitivity in South Africa. While this framework tries to balance efficiency, sustainability and equity, the authors acknowledged that it is a long-term vision that might not seem realistic (Fisher-jeffes *et al.*, 2017:9). Most importantly, the framework is limited to urban contexts, yet more social inequities and water service disparities are concentrated in rural municipalities. Moreover, the urgent need for water governance frameworks that will ensure the recognition of those who lack access cannot be undermined, especially during this crisis of COVID 19.

b) Water governance and poverty framework

In their study, Franks and Cleaver (2007) developed a water governance and poverty framework, which they tested in the Kimani catchment in south-western Tanzania. The framework aimed to understand how the arrangements for water governance are shaped and how they impact the poor. The framework was also based on the concepts of resources, mechanisms, outcomes for the poor, agents and the processes involved in water governance. The study concluded that understanding water governance could lead to a deeper understanding of how society orders its affairs with other key resources and between citizens in general (Franks and Cleaver, 2007:303). However, many questions need to be addressed for the framework to be utilised as a diagnostic tool and for interventions. Furthermore, while the framework can be a useful tool in water governance dynamics, it necessitates a deeper knowledge of what resources, processes, and mechanisms mean (what should be included and omitted), as well as an emphasis on poverty characteristics. This is envisaged to present challenges when utilising the framework to resolve social equity issues, specifically when drawing boundaries and parameters to ensure equitable water service provision.

c) Water governance multi-scalar framework

The study by Lu *et al.,* (2014) provided a multi-scalar and cross-disciplinary framework of equitable water governance and provision which addresses the geographical, disciplinary, time scales, and political jurisdictions in various contexts. The framework portrayed that water inequities are situated in particular cycles of water production and use. It further extended the notion of a single hydrological cycle to distinguish four predominant cycles, including those driven by irrigation, rural household, urban water supply, mining, and industry. More specifically, the framework showed abstract connections between social actors, natural circumstances, and technologies. However, it failed to demonstrate the power dynamics that persisted in these links (Lu *et al.,* 2014:137). While the framework successfully explained the nature of inequities in water governance, it did not provide tactical strategies or operationalisation regarding how these inequities can be addressed. Therefore, the study contends that there is the need for a more contextualised framework for each context as water governance problems vary from

one place to another (need to account for territorial challenges and specificities) (OECD, 2018:4). As a result, the importance of a water governance framework tailored to local government and tailored to the needs of the Amathole District Municipality should not be overlooked.

d) Ten steps to a water justice framework

Neal *et al.,* (2014:3), in their paper *"Why Justice matters in water governance: some ideas for a water justice framework",* provided a special edition of articles in which they make the argument for why justice matters in water governance by bringing together papers from various countries and researchers. This special issue made a significant contribution in that it expressed numerous perspectives that should be considered when developing a water governance framework for social equity. While the paper did not provide a water governance framework per se, it, however, proposed ten steps as indicated in the table below. The authors hoped to use this paper to drive future water justice research and to further explain a water justice framework.

Table 0.2: Ten steps to a water justice framework

1	Define the problem or issue – potential changes in the water cycle, availability and quality of water to different user groups, and determining the appropriate scale of analysis required (how the issue is framed both geographically and socially).
2	Review the history of and current approach to water management for the issue at hand. This includes hydrology, land use, and formal and informal institutions and organisations.
3	Understand how the problem/issue and the water management approach play out in a multi-scale, multi-level system. This will ensure that the problem of scale does not 'hide' potential injustices within the system.
4	Identify those directly and indirectly affected by the change, identify the generic 'public' and 'private' good issues, and positively or negatively affect those whom change is likely to affect positively or negatively.
5	Scope the justice issues after conversations with those identified above and obtain criteria and specific examples of just and unjust strategies. It is important to understand the conceptualisation of justice in stakeholders' minds and the specific concrete components of a policy or project that signify this. In this way, justice arguments can be linked to the decision-making process on an ongoing basis.
6	Review the history and concerns about future perceived injustices concerning the various stakeholders as the temporal dimension of justice plays a significant role in how justice and injustice are conceptualised.

7	Incorporate the specific procedural justice elements into the decision-making, especially the inclusion of vulnerable/marginalised groups and the natural environment as legitimate water users.
8	Identify the 'rights' and 'comparative' components of the allocation issues and structure the decision-making process accordingly
9	Identify current power imbalances that may negatively affect the delivery of procedurally and distributive just decision-making processes and outcomes. Address these at the beginning
10	Ensure that specific and knowledgeable resources are assigned when dealing with justice issues

Source: Neal *et al.,* (2014:3)

d) Organisation for Economic Cooperation and Development (OECD) 12 Principles on Water Governance

In collaboration with its member governments and other stakeholders, the OECD (2015a) developed the 12 Principles on Effective Water Governance, a framework described as "a must-do for governments to develop effective, efficient and inclusive water policies" (Taylor *et al.,* 2019). These principles include capacity, data and information, planning, regulatory frameworks, innovative governance, integrity and transparency, stakeholder engagement, trade-offs across users, rural and urban areas and generations, monitoring and evaluation, policy coherence, clear roles and responsibilities and appropriate scales within basin systems (OECD, 2015a; Akhmouch *et al.,* 2018). Based on the three mutually reinforced and complementary dimensions of water governance that comprise of efficiency, effectiveness and trust and engagement (Keller and Hartmann, 2020:440), the OECD framework is intended to enhance the water governance cycle from policy conception to implementation (OECD, 2015a; Taylor *et al*., 2019) and as a result produce more tangible and outcome-oriented public policies (Keller and Hartmann, 2020:440). Moreover, the OECD framework is aimed at stimulating inclusiveness, transparency and openness across stakeholders in determining what works, what does not work and what should be done (OECD, 2018:6) for their contexts, catalyse efforts for making good practices more visible and promoting learning from international experience (Keller and Hartmann, 2020:440). The principles are complemented by a collection of thirty-six (36) indicators (Water Governance Indicator Framework (WGIF) and +_120

questions that are used to evaluate the current condition of water governance policy framework, institutions, and instruments, as well as the need for progress over time (OECD, 2018:6).

The OECD framework is based on the notion that water challenges are place-based and context-specific (Akhmouch *et al.*, 2018; Keller and Hartmann, 2020). Therefore, it is envisaged that applying these principles will stimulate performance within various contexts. However, this study argues that the framework's impact in ensuring effective water governance is critical but not enough to ensure social equity in water governance, specifically at the lowest level. Furthermore, this framework fails to place social equity among its core values, and as a result, this negatively impacts who gets water, when and how. These observations were also noted by Taylor *et al.*, (2019), who argued that the OECD principles need to be reformed to include water justice as a core value (Taylor *et al.*, 2019:14). More specifically, Keller and Hartmann (2020) determined that the OECD principles are too abstract and unclear to use in water duties at the local level in their existing form, and they currently do not fit the local scale. (Keller and Hartmann, 2020:440). Therefore, these principles must still be applied at the local level, where water services are regulated.

e) Integrated Water Resource Management (IWRM)

Integrated Water Resource Management (IWRM) is a long-standing water governance framework that promotes coordinated management actions with environmental sustainability, economic efficiency and social equity (Grafton *et al.*, 2019:3). The framework promotes devolution of power to newly established institutions at regional and local levels. It encourages the adoption of a participatory approach in water development and management and the inclusion of women in decision making while recognising the economic value of water and its limitation as a natural and valuable resource (Förster *et al.,* 2017:521).

While about 80% of countries have adopted this approach (Grafton *et al.*, 2019; Olagunju *et al.*, 2019), Integrated Water Resource Management (IWRM) has been

criticised for not being prescriptive, and its usefulness has been questioned, particularly in regards to what it fails to say about water resource allocation (Grafton *et al.*, 2019:3). Furthermore, Forster *et al.*, (2017) contend that the Integrated Water Resource Management (IWRM) approach has been criticised for delivering results that often fall short of the promises and that water problems continue unabated or even worse. Meanwhile, Lautze *et al.*, (2011:6) argue that Integrated Water Resource Management (IWRM) is more prescriptive and has pre-defined outcome goals largely, whereas real-world societal action is coined by a multitude of social processes with rather uncertain outcomes. As a result, the inherent problems faced by the institutional approaches to natural resource governance pose a limitation in achieving beneficial social outcomes such as distributive justice (Förster *et al.,* 2017:522). More so, progress in operationalising the various dimensions of Integrated Water Resource Management (IWRM) has been slow and inconsistent. Several studies indicate that the advancement and effectiveness in water governance have been inadequate (Olagunju *et al.*, 2019:395).

Furthermore, according to the OECD, Integrated Water Resource Management (IWRM) has produced inconsistent results within and between nations, necessitating the development of operationalization frameworks that consistently and sustainably incorporate short, medium, and long-term goals (OECD, 2015a:3). Therefore, the study observed that the significance of Integrated Water Resource Management (IWRM), specifically at the national level, in influencing policy development and decision making cannot be contested. However, there is still a need for standardized water governance frameworks at the lowest levels to translate the Integrated Water Resource Management (IWRM) principles into action and ensure everyone has access to water services in a fair and just manner.

f) Water Governance Reform Framework (WGRF)

The Water Governance Reform Framework (WGRF) by Grafton *et al.,* (2019) consists of a set of seven strategic considerations that include well-defined and publicly available reform objectives, transparency in decision-making and public access to available data, water valuation of uses and non-uses to assess trade-offs and winners and losers, compensation for the marginalized or mitigation for persons who

are disadvantaged by reform, reform oversight and "champions", the capacity to deliver, and resilient decision-making (Grafton *et al.*, 2019:4). These ideas are based on three key methodologies for integrative water security research and are aimed to change water governance systems to deal with water concerns. The link between the state of knowledge and decision-making, an enlarged water research agenda, acknowledgement of inequities in water allocation, and the need for water justice are only a few of them (Grafton *et al.*, 2019:4). This framework was applied in Australia, Mexico, Tanzania, the USA, and Vietnam. Grafton *et al.*, (2019) contend that the framework complements the OECD framework, which is regarded as very prescriptive and includes restrictive rules and traffic lights, as well as the Integrated Water Resource Management (IWRM), which is regarded as ambiguous and highly flexible.

While the framework seems solid and promising, the study purports that there is a need to develop a framework for South Africa, taking into consideration lessons learnt and best practices from other frameworks applied in other contexts. This is due to the fact that water governance issues are context-specific and place-based. It is upon this premise that the study advocates for the development of a water governance framework that specifically deals with water governance and social equity issues in Amathole District Municipality in South Africa.

g) An operational framework for unpacking water governance

Jimenez *et al.,* (2020) developed an operational framework to assess and work with water governance. The framework constitutes four core components (values, attributes, functions, and outcomes). This is accompanied by a set of governance functions and attributes, illustrating how they can interrelate to achieve specific outcomes and how they are influenced by certain values and aspirations of organisations and communities. The governance functions aimed to capture the key elements and processes necessary to ensure proper development and management of water services and resources (Jimenez *et al.*, 2020:827). On the other hand, attributes are related to how the functions are implemented to achieve the desired outcomes. While the framework is crucial in addressing water governance concerns

from the local level to transboundary waters, the framework fails to further articulate operational activities. It is worth noting that the sub-functions within and between functions are not elaborated (Jimenez *et al.*, 2020:827). This poses a challenge in assessing water governance and adaptability in different contexts, especially when addressing inequalities. More so, there is a need for more practical guidance on how certain attributes are applied when performing water governance functions. Therefore, there is a need for a better understanding of how water governance outcomes can be improved by working with values. Failure to address these concerns hinders equitable water service provision and, if policymakers are not vigilant, may promote inequalities.

1.16.3 Challenges in existing current water governance frameworks

a) The need for context-specific and institutionalised frameworks at the local level

The most popular and well-recognised water frameworks such as the long-standing Integrated Water Resource Management (IWRM) (Grafton *et al.*, 2019:3) and the most recent OECD (2015a) water governance principles provide a more general and baseline (Keller and Hartmann, 2020:439), which in most cases is utilised at the national scale to provide a guideline in water governance. While these frameworks have indicated that they can be applied at all levels, including the local level, the study argues that such frameworks are critical but not enough if water challenges are not addressed using bottom-up approaches. Therefore, as noted by the study, there is a need for Water Service Authorities as implementers to have their institutionalised frameworks drawn from these menus and the basis provided by the more general frameworks such as the Integrated Water Resource Management (IWRM) and OECD. Additionally, context-specific water governance frameworks are required to handle distinct water governance difficulties in specific contexts (OECD, 2018; Grafton *et al.*, 2019). Therefore, these differences in contexts will always require more and more frameworks to suit each context. While it is true that similarities and commonalities appear in municipalities and different contexts, there is always a need to remember that what works for other contexts (Keller and Hartmann, 2020:443) does not necessarily work for everyone even when the same

settings are applied hence the need for a more contextualised and institutional framework for each municipality or Water Service Authority. This is supported by a study in the Netherlands by Keller and Hartmann (2020), which concluded that while the OECD principles may fit water governance in water authorities, their application in municipalities is still limited even though they both have the mandate to provide water services (Keller and Hartmann, 2020:443).

b) Adopting good practices from the western countries

Existing literature indicates that over 80% of the countries across the globe have adopted the Integrated Water Resource Management (IWRM) framework (Grafton *et al.*, 2019; Olagunju *et al.*, 2019), while about 34 countries have already adopted the OECD principles on effective water governance established in 2015 (OECD, 2018; Keller and Hartmann, 2020) to address water challenges. However, these two frameworks have been developed from western countries and have become popular in water governance. Interestingly, Olagunju *et al.*, (2019) observed that most water governance models are often a result of innovation from Western research and development, and as such, this poses a limitation when they are being applied in other contexts. He further argued that the challenge with water actors is that they adopt the best practices when they lack institutional adaptation and lack verifiable data to their contextual realities of the local environment (Olagunju *et al.*, 2019:396). Such a scenario is counterproductive and limits innovation in the achievement of social equity in water governance, especially at the local level. It is therefore critical that while it is important to learn from best practices from other countries, there is a need for more focus on research and development of water governance frameworks in each context (drawing lessons from international best practices, regional, national and local levels), particularly at the municipal level in South Africa taking into consideration the local realities. Focused research at the grassroots level will guarantee that designed policies and initiatives are relevant, address end-user problems, and address social equity concerns in water service provision.

c) Incorporation of social equity as the key to addressing water challenges

According to the United Nations (2012) and UN-Water (2019), most water governance frameworks are equity blind. Moreover, existing frameworks have always incorporated the three pillars of water governance. For instance, the Integrated Water Resource Management (IWRM) is based on efficiency, sustainability, and social equity, while the OECD (2015a), instead of social equity, includes other components such as trust and engagement, effectiveness and efficiency. These frameworks have always attempted to strike a balance between the three pillars; nevertheless, efficiency and sustainability will almost always come at the expense of social equity (Förster *et al.,* 2017:522). As a result, this compromises the need and urgency to fully incorporate and address the needs of the vulnerable and poor in ensuring justice, fairness and equality in their voice and access in water service provision.

Existing frameworks fail to recognize social equity as a key to unlocking and striking a balance among the main principles of water governance, avoiding the trade-offs that water actors frequently make, in which the social pillar is most commonly undermined. The study proposes a framework that prioritises social equity as the primary value, resulting in efficiency and sustainability, based on the ideas of egalitarians, who believe that beliefs in social equity imply justice and fairness in water governance. This notion is supported by the United Nations Water for Sustainable World in Camkin and Neto (2016), which argued that social equity in access to water services is a fundamental step towards security and that "the principle of equity, perhaps more than any technical recommendation, carries with it the promise of a more secure world for all" (Camkin and Neto, 2016:92).

d) Existing frameworks present the multi-faceted nature and interconnectedness of the water sector

The existing frameworks have always included the interconnectedness of the water sector and water governance. For instance, the Integrated Water Resource Management (IWRM) tries to strike a balance between environmental sustainability, economic efficiency and social equity (Grafton *et al.*, 2019:3) at all levels, while the OECD (2015a) principles on effective water governance are said to be applicable at all levels from international to local levels (OECD, 2015a; Akhmouch *et al.*, 2018;

Keller and Hartmann, 2020). On the same note, Jimenez *et al*., (2020) proposed an operational framework for unpacking water governance that addressed the local level, water resource management, and transboundary water, whereas, whereas the Lu *et al*., (2014) proposed a multi-scalar framework that brought together various disciplines that cut across boundaries and time scales. Previous research has shown that a water governance framework designed solely for use at the municipal or local level is still lacking in basic water service provision, as most, if not all, existing frameworks have attempted to fit at all levels in one way or another. While having integrated frameworks is important, the study contends that there is a need to have a framework for water governance at the local level. The proposed framework can be used for implementation at the lowest level, displaying responsibilities and functions particular to municipalities after each sector has done their part.

1.16.4 Establishing the gap and study justification

Following the elaborate and robust discussions on the aforementioned issues, the study reflected that various frameworks, studies and research have been done with the objective of addressing water challenges across the globe, South Africa included. The literature further indicates that these previous works have tried to ensure that the pillars of governance such as efficiency, effectiveness and sustainability have been addressed. However, what is clear is that less priority has been given to the pillar of social equity and yet this forms the heart of sustainable development specifically for those who have been marginalised and disadvantaged. While this is what we know from existing literature, the literature does not reveal any water governance and social equity framework that has been developed in Amathole District Municipality to address social inequities in water service provision and yet this is deemed crucial as water challenges are context-specific and vary from one place to another. These challenges differ from one scale to another, for instance, institutional, local, provincial, national, and global levels. As a result, whilst some of the established frameworks and existing studies contribute and make solid foundations to address water inequities, an umbrella approach or one size fits all approaches hardly address water challenges and rarely addresses the needs of those who have been neglected, marginalised, and excluded from their human right to

water services. In this regard, the study pronounces that Amathole District Municipality needs a water governance framework that can be implemented at the institutional level, with a focus on water service provision. The need for the development and design of the framework is driven by the need to address social equity as the core value and principle to ensure that human rights to water and sanitation are recognised, as a result, attain universal access in accordance with the Sustainable Development Goals (SDGs). This type of framework is presently absent but is desperately needed, particularly during the global COVID 19 pandemic, when human life is heavily dependent on the provision of water supplies.

1.17 CONCLUSION

This chapter has provided insights on water governance and social equity from various vantage points through a review of related literature. It has been suggested throughout the discussions in the chapter that much needs to be done to achieve social equity in water governance at the local level. Furthermore, this section has shed light on the achievement of equitable water service provision through shared responsibility in water governance. The chapter suggests that in order to maintain a just world where everyone has access to water services, social equity values of fairness and justice should constantly be used in water-related decisions and institutions. It is imperative to note that this chapter has shown that while efforts have been made to establish social equity water governance frameworks, there is still a need for a contextualized framework for Amathole District Municipality. The next chapter will go over the research methodology adopted in this study in detail and step by step.

CHAPTER THREE: RESEARCH METHODOLOGY

1.18 INTRODUCTION

The previous Chapter (Chapter 2) reviewed a substantial amount of literature on the issue under investigation. The study's various concepts, legal, and theoretical contexts were reviewed. The empirical literature on water governance and social equity was also explored, demonstrating that the desire for justice in water provision and governance is not new or unique. These previous studies also show that diverse methodologies were used based on the research's nature, resulting in a variety of findings and conclusions. Similarly, this chapter (Chapter 3) explains the methodology used in this research. It gives an in-depth description of the entire research process, beginning with the research approach's objective and ending with the researcher's unique research design, all while meticulously laying out the researcher's role.

Furthermore, the Chapter addresses various components drawing from the ever-expanding list of data sources, the specific protocols and ethical obligations observed during the data collection process. Finally, the step-by-step merit employed during data analysis is presented while promoting the integrity and accuracy of the data collected and the findings presented. Figure 3.1 below presents a summary of the whole research process adopted for this study.

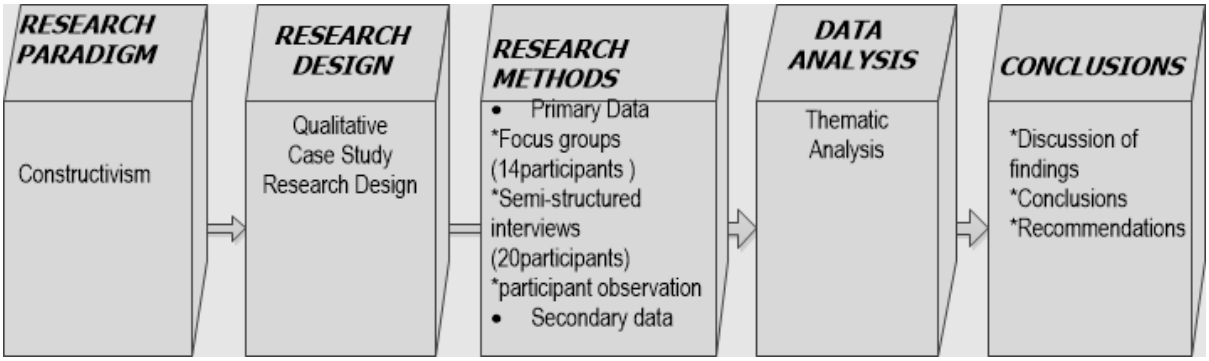


Figure 0.1: Research flow chart

Source: The Researcher (2021)

1.19 RESEARCH PARADIGM

Creswell and Creswell (2018) states that while philosophical ideas remain hidden in research, they heavily influence the whole research process by providing the basis on which research approaches (qualitative, quantitative or mixed methods) are built, and as such, they should be identified (Creswell and Creswell, 2018:46). Therefore, it is against this backdrop that this study was underpinned by the constructivist worldview, which assumes that there is no single reality and that reality is always subjective and socially constructed (Creswell and Creswell, 2018:48).

To develop a water governance framework for social equity, the need to understand the context (Amathole District Municipality), community experiences and the historical background that have led to social inequities in basic water service provision should not be undermined. Based on this notion, this approach was in line with Creswell and Creswell (2018:49), who argued that "social constructivists believe that individuals seek understanding of the world they live and work in". Furthermore, they argued that frequently, socially, and historically subjective meanings are negotiated. Interaction with others, as well as historical and cultural conventions, develop them rather than merely imprinting them on people's lives (Creswell and Creswell, 2018:48). As a result, the Constructivism worldview provided room for the study to position itself within the participants' settings, allowing an unbiased interpretation and understanding of reality in these contexts. In addition, it allowed the qualitative aspects of data such as attitudes, feelings, and emotions to be analysed, providing a more accurate and clearer view concerning the existing inequities in Amathole District Municipality.

More so, the growing concern in using the social aspect to address water problems led to the adoption of the constructivism worldview. The importance of understanding the social aspect in water governance was further elaborated by Zwarteveen *et al.,* (2017:2), who proclaimed that in the water policy, which positivists heavily influence, there had been a widespread recognition that water is mainly social and not the only natural. Therefore, the study has adopted the notion that it is time to shift from the positivists' worldview, which is strongly rooted in evidence, objectivity and verification of data and rational considerations to shape knowledge and define the truth or reality (Joy *et al*., 2014; Creswell and Creswell, 2018), as this is important but not enough to

address the persistent inequities in basic water service provision within South African municipalities. In light of the above assertions, the study employed the inductive approach to investigate the persistent inequities and challenges in water service provision and generate meanings, unlike positivists, who begin with the theory (Creswell and Creswell, 2018:48).

1.20 RESEARCH DESIGN

Research designs are types of inquiry within research (qualitative, quantitative, and mixed methods) approaches and are guided by the selected worldview. They provide specific direction for procedures to be followed in the research process (Creswell and Creswell, 2018:53). Therefore, a descriptive qualitative case study research design was adopted for this study. According to O'Sullivan *et al.*, (2017:48), this design provides a wealth of information that is easy to understand and interpret. It is effective in identifying problems, and in some cases, suggesting solutions. Van Thiel (2014:85) further elaborates that its applied nature allows concrete solutions for real-life problems since it depicts real-life settings and day to day issues. Therefore, in this particular study, a case study research redesign enabled the identification of inequities and inequalities within Amathole District Municipality, and this subsequently aided in the development of a framework to reduce these disparities.

More so, developing a water governance framework for social equity required an in-depth analysis regarding water governance dynamics and the persistent inequities in Amathole District Municipality. Therefore, a case study research design provided the best design to address the research questions since it is based on situated knowledge (Ngulube, 2015:4). Furthermore, unlike quantitative research designs that mainly focus on numeric data (O'Sullivan *et al.*, 2017:63), and other qualitative research designs such as narrative and phenomenology (knowledge of lived experience) and ethnography (good when learning a broad culture-sharing behaviour of groups or individuals) (Ngulube, 2015; O'Sullivan *et al.*, 2016; Creswell and Creswell, 2018), the case study research designs are effective in exploring processes and events as well as activities incorporating unique factors to individual cases and information about the context that is often ignored by quantitative designs (O'Sullivan et al., 2017:63). As a

result of the foregoing discussion, a case study research design was determined to be the most appropriate for this study.

1.20.1 TARGET POPULATION

Population refers to the total set of units which the investigator will be interested in (O'Sullivan *et al.*, 2017:170), the set in which a sample is drawn to generalise the units that have not been studied or to make inferences of the larger population (Lune and Berg, 2017:39). For this study, the target population mainly comprised of different actors involved in the Amathole District Municipality Water governance. As O'Sullivan *et al.,* (2017) pointed out, defining the target population requires the researcher to further specify the study population (that is, the units which the researcher will be able to access), and in this particular study, it is those who are involved in decision making of water-related issues at Amathole District Municipality (Amathole District Municipality municipal officials, local municipality officials, civil society, the private sector, and academics). Identifying the study population made it clearer as to who was included and excluded from the study population (O'Sullivan *et al.*, 2017:170).

1.20.2 SAMPLING

Van Thiel (2014:45) contends that it is difficult to include the whole target population in the study because of size, accessibility, and time constraints, amongst other issues. For these reasons, a sample was drawn from the target population using the purposive sampling method (a non-probability sampling technique). This method required the researcher to gather data from knowledgeable people and, in this case, people who provided valuable and relevant data (O'Sullivan *et al.*, 2017:189) regarding water governance and social inequities in water services within Amathole District Municipality. While this method has some serious limitations, such as the lack of generalisability, Lune and Berg (2017:39) suggest that purposive samples are typically beneficial to researchers, especially when using a qualitative case study research design. From the six local municipalities under Amathole District Municipality, the researcher purposefully selected three municipalities (including Amathole District Municipality, the Water Service Authority) from which participants were drawn. Amathole District Municipality was chosen because of its function as the Water Service

Authority (WSA), responsible for water governance in the area under study. Raymond Mhlaba Local Municipality and Mbhashe Local Municipality constitute the other two municipalities that were chosen in this study. The varying characteristics of the percentage of households with access to basic water supply were the reason for choosing these municipalities (as reflected in the Community household survey of 2016). Although these municipalities were the sampling units, it should be noted that they were not the units of analysis. The units of analysis were the municipal officials, academia and civil community from these selected municipalities.

a) Criteria used for sampling

A total sample of thirty-four participants **(n=34)** was used for the study. Of the thirty-four participants, twenty participants were engaged in semi-structured interviews **(n=20).** These participants were purposefully selected for their knowledge, role/responsibility, and direct/indirect involvement in Amathole District Municipality water governance. The remaining fourteen participants **(n=14)** were engaged in two focus group discussions of seven participants each (1 group from each of the two selected local municipalities). Participants selected for focus group discussions were the community members and were selected through the purposive sampling method enabling the research to obtain in-depth information regarding their experience as end-users and stakeholders in water service provision. In addition to purposive sampling, the researcher also applied the convenience sampling method (a non-probability sampling method that selects participants who are available) (O'Sullivan *et al.,* 2017) in selecting these focus group participants. This method played a critical role in ensuring the availability of community members to participate as the study was conducted during the COVID 19 crisis (Level 1).

b) Sampling size

While it is true to say that a large (representative) sample ensures reliability and validity (Lune and Berg, 2017), Creswell and Creswell (2018:306) indicated that there is no fixed rule in determining sample size in qualitative research. On the other hand`

Table 0.1: Designation of respondents

Designation of Respondents	Targeted Respondents	Instrument	Analysis
Amathole District Municipality Top management officials	8	Semi-Structured Interviews	Thematic Analysis
ADM Water Conservation Demand Managements (Closely works with the Department of Water and Sanitation)	1	Semi-Structured Interviews	Thematic Analysis
ADM Councillors	4	Semi-Structured Interviews	Thematic Analysis
Academia	4	Semi-Structured Interviews	Thematic Analysis
Local Municipality Representatives (Under ADM's Jurisdiction)	2	Semi-Structured Interviews	Thematic Analysis
Water Board (Amatola)	1	Semi-Structured Interviews	Thematic Analysis
ADM residents	14	Focus Groups	Thematic Analysis
Total	**34**		

Source: The Researcher (2021)

1.20.3 SOURCES OF QUALITATIVE DATA AND DATA COLLECTION METHODS

The study is underpinned by a constructivist world view that believes in understanding research experiences, the subjectivity of realities, feelings, perceptions, and emotions during the research process. It is for these reasons that primary data was used (Focus groups, semi-structured interviews, and non-participant observation). In addition, secondary data (document analysis) sources were also utilised to ensure credibility and authentication of data through triangulation. Most importantly, the researcher found it necessary to clarify the meaning of the research methods for this study. Therefore, terms such as research methods and research designs were used interchangeably. De Vaus (2001:9) in Ngulube (2015:4), purported that," It is uncommon to see research design treated as a mode of data collection rather than as a logical structure of inquiry". In support of this notion, scholars such as Payne and Payne (2004:175) refer to research designs as research methods. In this regard, this study, therefore, referred to research methods as techniques for gathering data while research designs as ways of designing or conducting research, as elaborated by Creswell (2013) and Rule and John (2011) in Ngulube (2015:4).

a) Focus groups

The study used focus group discussions to collect data. The technique involved the use of groups of people who have similar interests or experiences to discuss the subject under study (Creswell and Creswell, 2018:306). The researcher deemed it important to utilise focus group discussion specifically in collecting data from the community members of Amathole District Municipality as these would allow an array of discussions allowing participants to agree and or disagree on raised issues and reveal inconsistencies and variations that exist within the community beliefs and experiences. Broadening the views of the researcher, the focus group discussions aided in ensuring the credibility of data collected as various opinions, ideas, agreements, and disagreements were raised.

As such, the researcher conducted two (2) focus group interviews (7 participants each) with the community members from the two selected local municipalities (Raymond Mhlaba Local Municipality and Mbashe Local Municipality). These focus groups included community members to give reflections on the community involvement and understand the level of service delivery, which was crucial in answering Research Question 2 (identify inequities). The focus groups included male and female participants with age range and income, as illustrated in Chapter 4. Before the discussion, participants signed the informed consent forms agreeing to participate without force or coercion (*See Addendum F: Informed Consent Sheet)*. Giving their consent to record, the researcher alerted the group when the recording began and stopped. Furthermore, the group was informed of the research's goals and objectives, which included the fact that it was for academic purposes. The ethical considerations that were observed were consistent with Atkins and Wallace (2012:30) in Govender (2017:188), who asserted that an ethical approach should permeate and inform the entire study from planning, data collection and analysis as well as reporting and should not be a "mere recognition of anonymity or consent".

The researcher also used a semi-structured interview guide during the discussions to control and remain relevant to the discussion related to the phenomenon under study (*See, Addendum E: Semi-Structured Interview Guide)*. The focus group took an

average time of sixty minutes each and were carried out at agreed locations in the respective communities. While it is true that the presence of the researcher may have led to bias in responses during the discussions, these focus groups provided a platform for discussions and participation, they widened the way of thinking and provided new insights through different views and ideas regarding the phenomenon under study (Creswell and Creswell, 2018:306). Focus groups also enabled the researcher to observe and record reactions, feelings, and emotions expressed during the discussions regarding how participants feel about Amathole District Municipality water governance dynamics and social inequities. Furthermore, the researcher's thoughts, impressions and feelings, observations and experiences were jotted down in a diary throughout the research process to reduce researcher bias. Lastly, it is important to note that these focus group discussions were carried out during Level One (1), which permitted gatherings for work purposes subject to strict adherence to all health protocols (Republic of South Africa: Department of Health, 2021). As such, the social distance was observed, and masks were worn all the time.

b) Participant observation

The study adopted participant observation as another way to collect data. The researcher visited one of the Amathole District Municipality satellite offices to gather data when the country had relaxed its lockdown measures (Level 1) which allowed easy travel and access to offices. With the assistance of the municipal officials and staff, the researcher also visited one of the major water treatment plants and observed how the water is processed from raw water to the final product safe for consumption. While most of the processes were technical issues, the field visit enabled the researcher to understand the experiences, challenges, and feelings of those working on the ground to ensure water supply. The field visit also provided information on local realities and confirmed some of the theoretical assumptions and issues raised in the policy debates and water-related matters.

As asserted by Creswell and Creswell (2018), being a participant observer allowed the researcher to observe (emotions, body language) and experience the environment under study enabling them to be in the shoes of the participants and understand their day-to-day activities while corroborating information gathered through primary data

(Creswell and Creswell, 2018:306) as suggested by the constructivists. The researcher took notes and recorded all the observations, feelings, emotions, and experiences in a journal, and personal thoughts were also recorded on a separate note. With permission from the responsible authorities, the researcher took photographs of the related phenomenon under study (protecting the identities of those involved) as presented in the following Chapter (Chapter 4). Most importantly, during this tour, the researcher respected the site and avoided disruptions by following the guidance provided by the municipality when conducting research (Creswell and Creswell, 2018:172).

c) Semi-structured interviews

The study also utilised interviews as another way to collect data. Interviews were simply referred to as a conversation with the purpose of collecting information with the interviewer asking questions and the respondent providing the answers (Lune and Burg, 2017). While the study adopted the semi-structured type of interview, there are other types of interviews such as structured or formal (standardized) interviews and the informal or non-formal interview (unstandardized) interview (Lune and Burg,2017). Unlike formal (rigid, no deviations from questions) and informal interviews (no set wording and order to questions), semi-structured interviews were chosen because they provided room for reordering of the questions, allowed the flexibility, language adjustment and allowed more probing with the researcher guiding and having control of the process (Lune and Burg,2017).

Water governance requires the cooperation and involvement of various actors, and as such, the researcher carried out semi-structured interviews with twenty **(n=20)** participants from different sectors that are involved in the governance of water in Amathole District Municipality (one participant from Amatola Water Board, nine officials in management positions at Amathole District Municipality, six councillors and four participants from academia). Therefore, incorporating the actors as shown **in Table 3.1** above was deemed critical in answering the main research question and in achieving the main research objective.

Prior to the interviews, each participant signed an informed consent form agreeing to indicate voluntary participation (*See Addendum F: Informed Consent Sheet)*, which was done without force or coercion. Confidentiality was assured by explaining that the participant names and identities were not going to be mentioned but to be kept anonymous during and after the study. The purpose of the research was disclosed to be for academic purposes. These interviews lasted between 45-60 minutes and were held through Virtual Platforms (Microsoft Teams), and for those who could not use the application, telephonic interviews were done. These methods were chosen to observe the national restrictions regarding COVID 19. The tool (Microsoft Teams) employed had several advantages, including the ability to securely record interviews, which was one of them; it was also inexpensive, and it had a video option that allowed for body language monitoring. Most importantly, these methods provided a high level of professionalism (as compared to What's App), and they were easy (also the choice of the officials), had better connectivity and were cost-effective as compared to other platforms such as Zoom. During the semi-structured interviews, an interview guide (*See, Addendum E: Interview Guide*) was used as a parameter for the interview enabling the researcher to gather certain aspects relevant to the study (van Thiel, 2014:94).

Most importantly, semi-structured interviews created room for probing, enabling an in-depth understanding (not short answers) and gave room for participants to express their opinions, ideas, and perceptions (Creswell and Creswell, 2018:306), which were important in establishing both procedural and distributive justice. While it is true that these interviews may have been associated with researcher bias due to the presence of the researcher and that some people may not be able to equally articulate their views, semi-structured interviews also enabled the researcher to have control over the line of questioning and allowed participants to provide historical information (Creswell and Creswell, 2018:306) which was critical in answering the research questions. For those participants in the managerial positions, semi-structured interviews allowed the researcher to understand their underlying reasons for their decisions in water governance.

d) Secondary data sources - Document analysis

Secondary data sources were also used to augment the primary data that was collected. Primary and secondary sources of existing data (Creswell and Creswell, 2018) were used to ensure that all available relevant data is exhausted (thick and rich descriptions). In terms of the definition, secondary data were referred to as existing data sources that contain information that was created for a reason other than research but can be used or re-used to this end (van Thiel, 2014:105). Moreover, secondary data allowed triangulation of data and sources of data, promoting the credibility and accuracy of data collected from primary sources. Just like when using primary data sources, the researcher thoroughly prepared during the data collection process. Considering which material, subject, and sources were suitable for inclusion in the study was vital (van Thiel, 2014:105). Documents utilised enabled the researcher to obtain the language and words of the participants and were accessed at a convenient time, saving time and costs for the researcher. However, secondary data is not without its limitations, and it can be difficult to obtain, may be highly protected with information inaccessible to the public and private access, might not be authentic and may provide incomplete information (Creswell and Creswell, 2018:308). However, the researcher exhausted as many documents as possible and triangulated them with primary data for authenticity and credibility. The table below presents secondary sources that were utilised during the research.

Table 0.2: Secondary sources

Amathole District Municipality Documents	Material from other institutions
▪ 2019/2020 IDP ▪ 2019/20 Annual Report ▪ 2019/20 Water Service Development Plan ▪ DC12 Municipal money 2018 ▪ ADM water service by-laws ▪ Oversight Report on the Annual Report of Amathole District Municipality and Amathole Economic Development Agency (Aspire) for the 2018/2019 Financial Year. ▪ Envisioning an Amathole Smart District Towards 2058	▪ 2016 community household survey by Stats SA ▪ 2019/2020 AGSA Report ▪ Parliamentary Session Cogta and ADM 13 April 2021 ▪ Journals (related) ▪ Newspaper Articles ▪ South African Legal framework guiding water service provision

Source: The Researcher (2021)

Table 0.3: Link between research question, sources, methods, and justification

Research Question	Sources and Methods	Justification
What conceptual and theoretical constructs form the building blocks for a South African Municipalities water governance and social equity framework?	• Secondary Data • Semi-structured Interviews	-Both provide precision in determining water governance dynamics. -enabled the exploration of the underlying foundations and basis which guide the water institutions, their procedures and processes in water governance.
What factors impact water governance and social equity, and how do they influence social inequities in basic water provision in Amathole District Municipality?	• Semi-Structured Interviews • Participant Observation • Focus Group	-Enable triangulation and provided in-depth information on what factors and how they influence water provision from both the institution and community perspective point of view
What social inequities exist in Amathole District Municipality regarding water service provision?	• Semi-Structured Interviews • Participant Observation • Focus Group	-Provide in-depth knowledge on awareness of social inequities by stakeholders and the Water Service Authority -Provide first-hand and in-depth information on water inequities from those experiencing them.
What should be incorporated in a water governance framework for social equity in South African municipalities?	• Secondary Data • Focus Group • Semi-Structured Interviews	-Summation of findings aiding to the development of framework and recommendations to achieve social equity in water governance

Source: The Researcher (2021)

1.20.4 Methodological reflections of research methods adopted

This section provides a reflection of the research process, particularly the research methods adopted for this research. As mentioned above, the researcher adopted focus groups, semi-structured interviews, and observations as methods of data collection. The researcher deemed it important to highlight that this study was undertaken during the COVID 19 crisis when South Africa among other countries was imposing shutdowns and lockdowns to curb the virus and ensure the safety of its citizens. However, during the time of data collection, South Africa had moved its lockdown restrictions to level one (1) in which some gatherings (30 people) were permitted to

observe the rules and regulations. During this time, the researcher conducted group discussions and observations. As noted above, the focus groups were done face to face as the researcher and respondents observed the COVID 19 rules and regulations such as social distancing and sanitising hands as well as wearing facial masks (Republic of South Africa: Department of Health, 2021). During the focus group discussions, observing the facial expressions was a challenge as participants were wearing facial masks. However, the researcher managed to capture other expressions such as the use of hands and attitude during the discussions and this enabled the triangulation of data. Furthermore, the use of a recorder enabled the capturing of the discussions to ensure that all points were noted, and this was successful even though people were maintaining social distance. Participants responded with audio voices to ensure that they were had clearly by other respondents.

In employing participant observation as a data collection method, the researcher had set to spend one week in the field, however, because of the COVID 19 pandemic, this proved to be a challenge as workers were not present full time at the sites to be visited. To address this challenge, the researcher was provided with a vehicle by the Water Service Authority (municipality) which enabled the research to visit all the necessary sites which were deemed important for the research in one day. During this period, all necessary information was captured and recorded in a journal and some photographs were captured as supporting data.

The semi-structured interviews conducted were set to be carried out face to face, however, because of the pandemic, the researcher along with the participants agreed to use online platforms which have proven to be as effective as face to face interviews as described in section 3.3.3(c). Lastly, the document analysis engaged in providing to be useful and were available and they augmented the primary data collected. In conclusion, the researcher can safely say the research methods adopted worked well despite the mentioned hiccups which were addressed to ensure that the data collected was reliable and trustworthy.

1.21 DATA ANALYSIS

Creswell and Creswell (2018) contend that the process of data collection and data analysis in qualitative research happens simultaneously, unlike in quantitative studies.

This process (qualitative data analysis) is aimed at establishing and examining the contents of qualitative data (experiences, perceptions, symbols, meaning, feelings) with the intent of making sense of the text and images (Creswell and Creswell, 2018:311). The study, therefore, adopted thematic analysis as a technique of data analysis.

Being considered the foundational approach to qualitative data analysis (Braun and Clarke, 2006), the thematic analysis technique refers to a "method of identifying themes and patterns of meaning across a dataset concerning a research question…." (Ngulube 2015:10). On the same note, JVR (2016) added that "thematic analysis is the go-to method in most qualitative research" and that "a thematic analysis also provides an easily concise description of the emergent themes and patterns which are easily interpretable within a data set". More so, it forms the basis and foundation phase for interpretation (JVR, 2016).

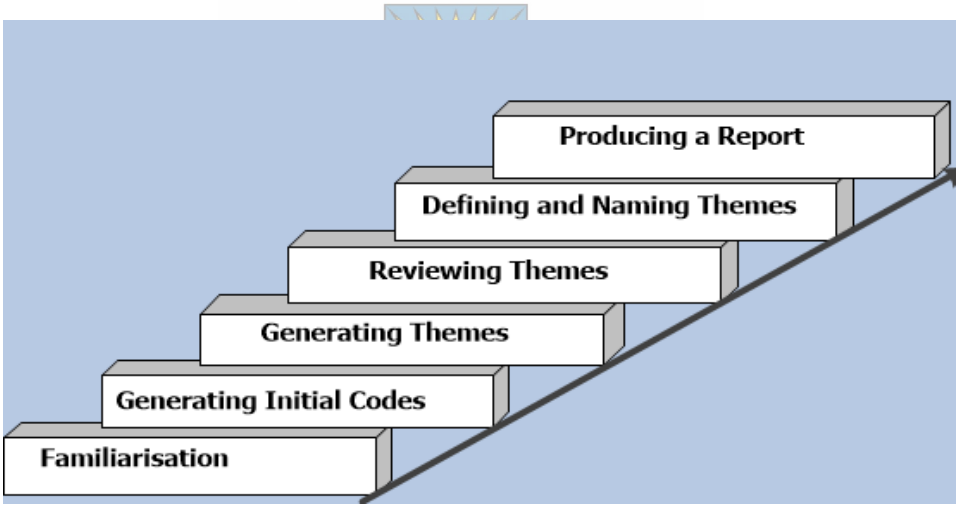


Figure 0.2: Six steps to thematic analysis

Source: Braune and Clarke (2006)

Among its core advantages, a thematic analysis provided the core skill useful for conducting other forms of qualitative analysis. Furthermore, through its theoretical freedom, the technique also provided a flexible and useful research tool allowing a rich and thick yet complex account of data (Braun and Clarke, 2006). It is a useful method for examining the perspectives of different participants, highlighting similarities and differences and generating unanticipated insights (Braun and Clarke, 2006; JVR, 2016;

Nowell *et al.*, 2017). Its ability and usefulness in summarising key features of a large data set forces the researcher to take a well-structured approach to handle data, helping to produce a clear and organised final report (Nowell *et al.*, 2017:2) cannot be undermined. While the technique poses many advantages, the researcher acknowledges its limitations, such as its flexibility, inconsistency, and lack of coherence when developing themes derived from the research data (Nowell *et al.*, 2017:2). However, this was addressed by applying and making explicit the epistemological positions that coherently underpinned the study's empirical claims (Braun and Clarke, 2006; Nowell *et al.*, 2017). To perfect the process of thematic analysis, the researcher adopted Braun and Clarke's (2006) most widely used steps for conducting a thematic analysis. The process entails six steps which are described below.

Step 1: Familiarisation

At the initial data analysis stage, the researcher familiarised herself with the collected data (Caulfield, 2020). As expressed by Nowell *et al.,* (2017:5), data collected came in various forms, which included recorded interviews, policy documents, observations (recorded during the interviews) images as well as recorded observations from participant observations and field notes (recorded during the field trip). Data were organised and grouped in preparation for the analysis. Columns, markers (at the margins), tables and memos were used in grouping and arranging data. During this stage, interviews were transcribed, notes were typed, materials were printed and scanned (where necessary), and collected data were sorted and arranged according to data sources (focus groups, interviews, observations, and secondary data). The researcher looked and relooked at the data, read, and reread it, providing a thorough and deep analytical lens on the grouped data. As noted by Braune and Clarke (2006) in Nowel *et al.*, (2017:5), during this process, the researcher immersed herself with the data to familiarise herself with the depth and breadth of the content. Intensive reading allowed the researcher to be familiar with the patterns of the collected data. More so, Qualitative research also implies thick and rich descriptions to ensure trustworthiness (van Thiel, 2014:140), and as such huge volumes of data were gathered. At this point, the filtering technique was used to filter any irrelevant data

without distortion. The process is also referred to as "winnowing the data" by Creswell and Creswell (2018:313). The remaining relevant material (to the phenomenon under study) was arranged and categorised, starting with coding.

Step 2: Generating Initial Codes

After familiarising with the data, the researcher engaged in the second stage of identifying preliminary codes. This coding stage refers to data organising by text or image segments and writing a word representing a category at the margins (van Thiel, 2014; Creswell and Creswell, 2018). More so, Nowell *et al.,* (2017:6) defined qualitative coding as the process of reflection and as a way of interacting with and thinking about data. Codes assigned (summary of the contents of certain concepts) reflected the actual language of the participants and allowed the researcher to simplify and focus on specific characteristics of the data. Furthermore, according to Lune and Berg (2017:182), it is the coded form of data that is analysed; thus, this is a significant stage in qualitative data analysis. Finally, the researcher immersed herself into the investigation, using more analytical codes and categories derived from existing theories and explanations relevant to the research focus. Every transcript and interview was thoroughly interrogated and coded accordingly.

Step 3: Generating themes

The third stage began when all the data was initially coded, and a list of the different codes identified across the data set was developed (Braun and Clarke, 2006; Nowell *et al.*, 2017). The researcher then identified patterns among the codes and generated themes. In their definition of themes, Nowell *et al.,* (2017:8) refer to a theme as "an abstract entity that brings meaning and identifies a recurrent experience and its variant manifestation". Thus, a theme captures and unifies the nature or basis of the experience into a meaningful story. More so, it is important to note that themes are broader than codes, and at this stage, several codes were combined to generate themes. Identified themes also displayed multiple perspectives from the participants and were supported by the specific evidence, thereby giving authenticity to the findings and conclusion reached (van Thiel 2014:110). Most importantly, this stage ensured that the researcher's thought process referred to the relationship between codes, subthemes, and themes (JVR, 2016).

Step 4: Reviewing themes

Braun and Clarke's (2006) step four of the thematic analysis states that a set of themes would have been devised at this stage. They must first be refined to guarantee that the resulting themes are both useful and accurate representations of data. The researcher, therefore, compared the generated themes to ensure a fair representation of data. As a result, some themes were split, some combined and some discarded, ensuring that the remaining themes were more accurate, relevant, and useful. More importantly, the researcher ensured that the other themes are thematically connected while maintaining a distinct and distinguishable distinction between them (JVR, 2016).

Step 5: Defining and naming themes

This stage entailed the naming and defining of each theme. As asserted by Nowell *et al.,* (2017:10), defining a theme involves formulating what each theme means and figuring out how it helps us understand the data. This process entailed coming up with more simple names and themes that were easy to understand. At this point, data was woven into a single narrative (JVR, 2016) and ample time was spent developing themes to improve the credibility of the findings, as noted by Lincoln and Guba (1985) in Nowell *et al*., (2017).

Step 6: Producing a Report

Once the researcher fully established the themes and was ready for the final analysis, the final stage of the reporting stage began. This stage involved the writing up of the data analysis, which included a clear introduction establishing the research question, aims and approaches that were taken (Braun and Clarke, 2006; Nowell *et al*., 2017). Following that, a methodology was written outlining how data was collected, and the thematic analysis was carried out. Each theme was addressed in the finding and results section, starting with how it came about, its meaning, and how it answers the research questions. The researcher ensured that the analysis of the results convinced the readers of the rigour's rigour and merit of the findings (Nowell *et al*., 2017:11). The researcher also made sure that the write up went beyond a mere description of the themes but rather a portrayal of the analysis supported with empirical evidence that addresses the research questions. This process was further supported by King

(2004) in Nowell *et al.,* (2017), who asserted that direct quotations from participants should be included as they are an essential component of the final report. Furthermore, Nowell *et al*., (2017) argued that at this point, raw data extracts should be inserted within the analytical narrative to explain the complete story of the data, which goes beyond a summary of the data and convinces the reader of the validity and merit of the study (Braun and Clarke, 2006; Nowell *et al*., 2017; Caulfield, 2020). To maintain accuracy, the researcher went back to the reflective journal to see if the observations and conclusions had been presented correctly and to see if the literature validated the findings. Furthermore, the researcher examined the related findings, including those that were unexpected.

1.22 TRUSTWORTHINESS OF QUALITATIVE DATA

While quantitative studies focus on validating their findings through ensuring reliability and validity, this study focused on ensuring rigour and trustworthiness because of its qualitative nature. This narrative was further elaborated by Creswell and Creswell (2018), who argued that it is crucial to ensure that findings in a qualitative study are accurate and consistent with the researcher's standpoint, the participant, or other readers (Creswell and Creswell, 2018:322). The researcher, therefore, adopted various strategies to ensure that the findings were trustworthy. Most importantly, one should note that this process of validation of findings occurred throughout the whole research process.

The researcher used several strategies during data collection to ensure the study's credibility, ensuring that conclusions are legitimate, accurate, and right so they can be trusted, such as triangulating multiple sources to validate data (van Thiel, 2014:140). In this study, data collected from interviews (focus groups and semi-structured interviews) was cross-checked with supporting documents (such as municipal reports and published and unpublished reports by other bodies such as Stats SA, AGSA, and WRC) to ensure a true representation of data collected. Furthermore, data collected from municipal reports and interviews were cross-referenced with data from the focus group discussions to give a clearer view of the reality in the communities, for instance, the level of community involvement in the water-related decisions within Amathole

District Municipality. This process enabled the authentication of data and assisted in building a coherent justification of themes, thereby ensuring credibility.

The researcher also used member checking to ensure the credibility of findings (Creswell and Creswell, 2018:322). Researcher bias was clarified through reflexivity, clarifying how the researcher's background, opinions and perception shaped the interpretation of findings, for instance, the mere fact that the researcher has been a resident for two years under the Amathole District Municipality jurisdiction. A detailed description of the whole research process was provided, allowing transparency to the reader and participants to understand the direction of the study, enabling them to trace the steps and verify collected data and findings that have been reached regarding water service inequities in the Amathole District Municipality. The researcher also recorded the interviews (with the consent of the participants) to promote accuracy when analysing data. Most importantly, attention was given to certain aspects during the selection and compilation of data, such as who collected the data, why, where, and how it was analysed and for what purpose, like this, all affected the study's credibility (van Thiel, 2014:105).

While Creswell and Creswell (2018:324) argued that qualitative studies are not meant to be generalised, they agree that their findings can be applied in other contexts with similar cases and the same settings. In this study, those municipalities with the same settings as Amathole District Municipality can utilise the framework developed and use the recommendations. This ensured that the study is trusted. Furthermore, to ensure that this is possible, the researcher provided good documentation of the whole research process so that the reader can apply findings of the Amathole District Municipality case study in their municipalities if they have the same settings (such as the same historical background and same reasons that have led to the development of these social inequities in basic water provision).

A clear and step-by-step documentation process allowed the study to be consistent and dependable, thereby ensuring that the study is trusted. Also, documents were cross-checked to avoid obvious mistakes, and during coding, the researcher made sure that the codes are not drifting through data comparison (by writing memos and

their definitions) (Creswell and Creswell, 2018:323). Adopting all these strategies ensured the study's accuracy, consistency, and replicability, allowing rigour and the study to be trusted.

1.23 ETHICAL CONSIDERATIONS

Studies that involve humans require the establishment of a special relationship between the researchers and participants. Therefore, researchers require cooperation from their subjects, and in turn, participants expect protection and are safeguarded from any harm or risk that may occur as a result of their cooperation (O' Sullivan *et al.*, 2017:309). Against this backdrop, the researcher reduced the risk, protected, and safeguarded the subjects through ethical practices. In this study, these ethical practices were considered in five phases.

Prior to the study, various ethical considerations were observed. The University of Fort Hare code of ethics was thoroughly read to understand ethical implications and ethical considerations. The researcher also chose a site for the study which did not raise power dynamics issues with the researchers, as asserted by Creswell and Creswell (2018:174). A research proposal was submitted to the Departmental Research Higher Degrees Committee (DRHDC) and School Research Higher Degrees Committee (SRHDC) of the University of Fort Hare for approval. Permission and approval were sought from gatekeepers. The researcher applied for and obtained an ethical clearance certificate from the University of Fort Hare's Research Ethics Committee, and my reference number was: SIB051SHUT01 *(See, Addendum A: Ethics Approval)* and permission was sought to undertake the study from the Amathole District, municipality *(See, Addendum B and C: Requisition letter to undertake the study).* These bodies assisted in reviewing the potential risks associated with the study and helped protect human rights (Creswell and Creswell, 2018:170). Approval letters granting permission to undertake the study was granted by Amathole District Municipality *(See Addendum D: Approval Letter to Conduct Research by Amathole District Municipality).*

As the study commenced, the researcher identified a problem that needed to be addressed and beneficial to the communities (persistent inequities that need to be

addressed by developing a water governance framework for social equity lacking). Furthermore, the study's objective and motivation were clearly stated to be the completion of a master's degree in administration (Public Administration). The data collection process entailed thorough research regarding the norms, values, and charters of indigenous cultures in the Amathole District Municipality to avoid violations and maintain respect for them. These included gender, culture, religion, and other different issues encountered during the study.

The data collection phase was the most critical part as this involved human interaction and disclosure of information. Strong moral-ethical consideration was consciously observed to avoid harm to the participants. The researcher encouraged transparency and avoided deception, a situation where participants understand one purpose of this study, but the researcher has a different purpose in mind (Creswell and Creswell, 2018:172). The process was done through a debrief on the aims and reasons why the study is being undertaken, and clarification regarding the publishing and reporting of results was extended to the respondents, who were assured that the data collected was only for academic purposes.

The participants were asked to fill out the consent forms (Lune and Berg, 2017; Creswell and Creswell, 2018) at their own will. The researcher abstained from coercion and blackmail in the signing of consent forms. Rather voluntary participation was encouraged. Consent was also sought when recording the interviews (*See Addendum E: Informed Consent Sheet)*. Participants were alerted when the recording started and when it ended, as this assisted in building trust and credibility of the study and avoiding deception to the participants.

Also, the researcher ensured anonymity and confidentiality (Lune and Berg, 2017:57) to protect participants' identities from any harm and risks. The process entailed ensuring that participants' names were not disclosed and that the data collected was kept in a safe place. Most importantly, the researcher avoided collecting harmful information by sticking to the questions and avoiding sensitive information. However, the researcher acknowledged that it is difficult to anticipate that sensitive or harmful information during data collection. To address this concern, the researcher abided with

the ethical code for researchers in which the privacy and confidentiality of information revealed are to be protected (Creswell and Creswell, 2018:174) at all costs.

Power imbalances were respected, especially in this qualitative study, where semi-structured interviews were used to collect data. Considering how sensitive the interview was, whether participants have a say in how their responses were interpreted, how the interview will improve the situation in Amathole District Municipality, how critical the respondents are questioned, and the consequence after the research were stated in some of the questions underpinning the process. Therefore, the researcher respected the power imbalances (Creswell and Creswell, 2018:172). Additionally, the researcher provided equal treatment and was consistent in how data collection was done. The sites where data collection took place were respected, adhering to the agreed times as per the municipality research guidance. Any disruptions and disturbances to the normal functioning of its operations were avoided. Lastly, the sponsorship and research interests were clarified during data collection as this helped establish the study's trust and credibility.

During data analysis, the researcher still observed ethical considerations, ensuring an accurate interpretation of the data collected. This process entailed having an objective analysis, refraining from bias, avoiding going negative and only disclosing the positive data (Creswell and Creswell, 2018:175). As a result, the true findings were presented despite the feelings and personal interests of the researcher. Most importantly, the participants' privacy was protected and respected, as explained during the data collection process. Therefore, confidentiality and anonymity were maintained, ensuring the privacy of participants.

Lastly, when reporting, sharing, and storing the findings, ethical obligations were also considered. The researcher acknowledged citations acquired from all secondary data to avoid plagiarism (Lune and Berg, 2017:2002). A Turnitin plagiarism report was attached after completion of the research indicating the originality of the study (*See, Addendum H: Plagiarism Report)*. The researcher also abstained from falsifying data, findings, conclusions, and authorship when reporting. Rather honesty and integrity were the hallmarks of the study from the beginning till the end.

1.24 CONCLUSION

The Chapter has given an extended overview of the research methodology detailing the worldview, research design, targeted population, sampling techniques, and sample size adopted by the researcher and provide reasons why these were chosen. Furthermore, the Chapter specified the data collection methods and analysis used and how rigour and trustworthiness were ensured in the study. Lastly, it presented how the researcher upheld the ethical considerations as these are vital in every study undertaken. The next Chapter is a presentation of the data collected and findings derived from this Chapter.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

1.25 INTRODUCTION

The previous chapter presented a detailed description of the research methodology undertaken in this study. In addition, it elaborated on the data collection methods employed and specified the techniques adopted during data analysis. Meanwhile, this Chapter focuses on the data presentation, analysis, and interpretation of data collected to achieve the research's main objective of developing a water governance framework for social equity in South African municipalities. The study came up with the following sub-objectives to achieve this main objective:

(i) Determine the conceptual and theoretical constructs that form the building blocks for a water governance framework for social equity in Amathole District Municipality.

(ii) Identify social inequities in basic water service provision in Amathole District Municipality.

(iii) Identify factors that impact water governance and social equity and their influence on social inequities and basic water provision in Amathole District Municipality.

(iv) Establish a sustainable water governance framework for social equity in South African municipalities.

1.25.1 Data collection methods

Primary data was gathered using semi-structured interviews, focus group discussions, and participant observation and secondary data were collected through document analysis. The response rates are shown below in Table 4.1.

1) Semi-structured interviews

Table 0.1: Semi-Structured Interviews Response Rate 65%

Participant	Sample	Response	%
Top officials in ADM/management position	6	3	50
Councillors	4	3	75
Water Board	1	1	100
ADM WCDM (works closely with DWS)	1	1	100
Academia	4	1	25
Local Municipalities Representatives	2	2	100
Head of Satellites for ADM offices in Local Municipalities	2	2	100
Total	**20**	**13**	**65**

Source: The Researcher (2021)

2) Participant observation

The researcher carried out field visits in one of the Amathole District Municipality satellites to understand the local realities regarding water service provision. During the field visit, various sites such as water treatment plants, dams and reservoirs were visited, photographs were taken with the permission of the responsible authorities and notes were jotted down. During this tour, the researcher was a participant observer. Data collected enabled the triangulation of data collected from other sources to establish rigour in the research.

3) Focus groups

The study conducted two focus groups as presented in Tables 4.2 and 4.3 below.

Table 0.2: Focus Group 1 Response Rate 85%

Participant	Age	Age range	Gender	Occupation	Income
1	27	20-30	Female	Employed	Salary
2	61	60-70	Female	Pensioners	Grants
3	76	70-80	Female	Pensioners	Grants
4	57	50-60	Female	Pensioners	Grants
5	66	60-70	Male	Pensioners	Grants
6	33	30-40	Male	Employed	Salary
7	55	40-50	Female	Pensioners	Grants

Source: The Researcher (2021)

Table 0.3: Focus group 2 response rate 71%

Participant	Age	Age range	Gender	Occupation	Income
1	33	30-40	Female	Employed	Salary
2	60	60-70	Female	Pensioners	grants
3	43	40-50	Female	Employed	Salary
4	30	30-40	Female	Employed	Salary
5	31	30-40	Male	Employed	Salary
6	35	30-40	female	Not employed	
7	27	20-30	Female	Not employed	

Source: The Researcher (2021)

4) Secondary sources

The researcher also utilised secondary sources to triangulate data sources and attain credibility in this study, as indicated above in Table 3.2.

1.25.2 Demographics

Gender and income were observed during data collection as these directly/indirectly influence inequities in water service provision, as discussed below.

a) Gender

The UN-Water (2019) argued that women, the vulnerable, the minority, and the poor are most affected by water inequities (UN-Water, 2019). Hence the demographics presented were of utmost importance in developing the water governance framework for social equity. From the two focus group discussions held, it can be deduced that eleven out of the fourteen respondents were female, while only three were male. The high number of females can be attributed to cultural factors where the traditional role of water cartage fell on girls and women (Hall *et al.*, 2018:30). Resultantly, the study established that women play a significant role in accessing water. They are, in most situations, the ones who suffer the repercussions of lack of access, spending the majority of their time waiting in lines and, in some circumstances, walking long distances with buckets over their heads to get water in locations where there is insufficient water supply. Hence, their contribution to the development of a water governance framework for social equity was of paramount importance.

b) Income

Water inequities in most developing countries are attributed to affordability concerns; thus, the study also explored participants' incomes. World Health Organisation (2017) asserted that water costs should not take more than 3% of the income (UN-Water, 2019). Tables 4.2 and 4.3 revealed that six of the focus group participants were pensioners and heavily relied on social grants, while six were working and have a stable income, and the remaining two of the fourteen participants were not employed. Therefore, it can be deduced that paying for water services in Amathole District Municipality areas can be a burden because communities rely more on government grants. Furthermore, the study demographics revealed that the municipality is associated with a high rate of poverty and unemployment (Amathole District Municipality, 2020), posing a challenge in the affordability of water services.

1.26 DATA ANALYSIS

The six-step thematic analysis process propounded by Braune and Clarke (2006) was adopted in the analysis of data. This process started with familiarisation and preparation of data for analysis through transcription. Two focus group discussion recordings and thirteen audio recordings from the semi-structured interviews were repeatedly listened to, translated, and transcribed. As a result, all data collected was directly translated into English by both the translator and researcher. Following this, initial codes were generated, enabling the researcher to align data collected to the research questions, theoretical and conceptual frameworks. The process was followed by combining the codes into overarching themes for accurate data depiction allowing the researcher to identify missing links and draw meaning from the themes generated. The researcher then looked at how to support data by reviewing themes, which was followed by creating and naming themes allowing the researcher to conduct a thorough and systematic study of the themes' contributions to data understanding. Lastly, as discussed below, the researcher drew a report and presented the findings.

1.27 FINDINGS AND RESULTS

Lune and Berg (2017) noted that the terms findings and results are often synonymous, although they have a slight difference in their meaning. In defining the terms, they argued that findings refer to "what data says" while results offer interpretations, meaning and analysis of the data (Lune and Berg, 2017:209). Furthermore, Lune and Berg (2017:209) noted that qualitative reports are often organised according to the conceptual headings. However, the study followed the trend of thought by Edmonds and Kennedy (2017:328), who purport that the research findings are "usually organised by research questions or by themes", and they advised that such themes may be presented as sections with relevant sub-sections (Edmonds and Kennedy, 2017:238). With the thick and rich description occupying the focus of the findings, the study adopted a narrative and descriptive form to present the findings, and this was in line with Creswell (2009), who established that narrative texts are the most frequent form of displaying qualitative data (Creswell, 2009:200). While this approach was utilised to present the bulk of the findings, quantitative data and tables were also included. This approach was in line with Edmonds and Kennedy (2017:327), who argued that qualitative inquiry should use some quantitative data "if it helps to provide context and support to the findings". The researcher also used direct quotations to illustrate key points and ensure trustworthiness (Govender, 2017) in reporting the findings. This was in line with Edmonds and Kennedy's (2017) opinion who asserted that evidence presented in research findings should "include but is not limited to quotations from interviews and experts from observations and documents". Additionally, the research findings were linked to the theoretical and conceptual framework directing the themes to the conclusions of the study.

Four super-ordinate themes emerged from the data analysis, and these included: theoretical and conceptual constructs that form the building blocks for water governance and social equity framework, inequities in water service provision in Amathole District Municipality, factors affecting water governance and social equity in Amathole District Municipality and their influence on basic water service provision and measures to improve water governance and social equity in Amathole District

Municipality. Each of the super-ordinate themes was examined, along with the sub-themes which emerged.

1.27.1 Conceptual and theoretical constructs that form the building blocks for water governance and social equity framework in Amathole District Municipality

a) Theme 1: Alignment of municipal planning (Integrated Development Plan) and the Human Rights-Based Approach

Proponents of the Human Rights-Based Approach argue that planning is among the crucial building blocks in realising the human right to water and sanitation, addressing social inequities, and achieving equitable water governance (Human Right 2 Water, 2021:40). Furthermore, while water knowledge should inform planning, it should not be restricted to water volumes or the quantity of services supplied, according to the Human Rights-Based Approach. Rather planning should encompass various differentiating features such as roles, causes, and gaps in water governance. Consequentially, this alignment ensures that disparities and water inequities are identified earlier and that strategies to remedy the disparities can be adopted.

Based on the officials engaged during the interviews, the study revealed that Amathole District Municipality engages in an Integrated Development Planning process, developing an Integrated Development Plan (IDP). In terms of the Municipal Systems Act (Act No 32 of 2000), the Integrated Development Plan is considered as a planning tool to ensure that municipalities achieve the objectives of local government and developmental goals as prescribed by Section 152 and 153 of the Constitution. Most importantly, Section 23(c) of the Municipal Systems Act (Act No 32 of 2000) further clarifies that the Integrated Development Plan is meant to ensure the progressive realisation of Sections 24, 25, 26, 27 and 29 of the Constitution and among these fundamental rights is the right to sufficient water services.

Sixty-five per cent of officials interviewed further highlighted that the Integrated Development Plan (IDP) guides the municipality's operations and decision-making processes and that the plan is reviewed every year as prescribed by the Municipal

Systems Act (Act No 32 of 2000). These officials further indicated that the Integrated Development Plan process in Amathole District Municipality is done as a consultative process that not only involves other organs of state such as the local municipalities but also ensures the inclusiveness and consultation of local communities to ensure that their needs and priorities are heard as prescribed by Section 29(b) of the MSA (Act No 32 of 2000). This is echoed in the following sentiments below by one of the officials who highlighted that:

"We engage yearly in an Integrated Development Planning process, and we consult our communities through roadshows that are held in each local municipality. All community needs are considered. However, not every community need will be implemented because of budget limitations, so we take the most serious issues first, and they become our priority".

This approach is also in line with the Human Rights-Based Approach, which contends that planning should take into account all aspects of a right, including availability, participation, accountability, sustainability, and information, in addition to the quantity and quality of services supplied (Human Right 2 Water, 2021:40).

Furthermore, the Human Rights-Based Approach advocates that the adopted projects should seek to realise narrow outcomes associated directly with the activity itself and realise the outcomes that support the realisation of human rights. Projects adopted should address the needs of the most vulnerable and focus on the disadvantaged groups, and as such, stakeholder engagement should ensure meaningful participation and sustainability throughout the long-term outcomes (Human Right 2 Water, 2021). Ensuring the Human Rights-Based Approach in water and sanitation planning ensures that the strategies and programs focus on the rights rather than the needs. Human rights should be considered from the beginning of the project implementation process until the end, and evaluation and focus should be on procedures rather than just results. Therefore, women, the vulnerable, the minority, and other disadvantaged groups should be prioritised.

While the above indications revealed that the municipality carries out an Integrated Development Plan process and facilitates communication through the political

structures, community websites, and WhatsApp groups; the study also revealed that there is no clear process of ensuring that the voice of these targeted (vulnerable, poor, women, marginalised, minority) groups are heard. In quintessence, the study noted that such mechanisms presented by Amathole District Municipality during its planning process do not necessarily provide platforms for these targeted groups but provide an open platform that impedes the voices of the minority and the disadvantage to be fully heard. This is highlighted in the following excerpt below by one of the officials:

"*We do not have any special processes in which we engaged these vulnerable groups such as women in particular or the poor. However, we make sure that we take community inputs through the IDP roadshows, political structures complaint box, and municipal websites and what's app groups".*

Thirty per cent of the officials further indicated that assessments of existing infrastructure are performed through official municipal visits and that the municipality has a Water Conservation Demand Management Department (WCDM). This department closely works with the Department of Water and Sanitation (responsible for water resources management of dams and water sources) and collects water systems, water quantification, and water balances in Amathole District Municipality, and information collected informs municipal planning.

Therefore, the study established that the municipality's Integrated Development Plan is partially aligned with the Human Rights-Based Approach since it considers some of the approach's principles such as sustainability, information, fairness, and non-discrimination. However, achieving the human right to water and eliminating social inequities in water governance requires more than these activities.

b) Theme 2: Established policies, legislation, and regulation that promotes social equity

Policies provide the initial step in realising the human right to water and achieving social equity in water governance. Furthermore, policies accompanied by legislation and regulation provide an enabling environment necessary to develop pro-poor water governance and consider those who lack access to water services. As such, Majzoub (2010:150) argues if the policy objectives are to be achieved, policies

should be administratively enforceable, socially accepted, and sensitive to the political, social, economic, and technological aspects of a given context.

Officials interviewed highlighted that the municipality is guided by the South African water laws such as the Water Service Act (Act No 117 of 1997) and the Local Government Acts such as the MSA (Act No 32 of 2000), MFMA (Act No 56 of 2003) and Municipal Structures Act (Act No 117 of 1998). Participants further indicated that this water policy provides a framework and gives the mandate to water service authorities. There were more indicators that policy informs and governs funding. Indications were also made that the policies directing water service providers are an enabler of social equity and fully understand the essential necessity of the human right to water. This is purported by the officials in the following excerpts below:

"The policy guides us, and it tells us what we are supposed to do. It directs our decision making and the procedures and operations of the institutions. Policies that guide us are enablers to the achievement of social equity as they fully recognize the disparities that have existed for a long time".

Another official commented that:

"Our policy provides for the achievement of social equity and the realization of the right to water and sanitation. An example is the Bill of Rights contained in the Constitution of South Africa".

In terms of regulation, the municipality has set by-laws related to water provision, such as the Rural Household Connection Policy, which is aimed at legalising the illegal connections that have been done in most of its rural areas. The study also revealed that Amathole District Municipality had implemented the Free Basic Water Policy to address affordability concerns. This is highlighted below by one respondent from the interviews who noted that;

"We have implemented the Free Basic Water Policy where those who do not afford water can get the minimum standards. Most households have benefited from the Free Basic Service since most of them are unemployed and their income falls below the poverty line; hence, they cannot afford to pay for water.

While all participants indicated the importance of strength presented by the policy and regulation guiding water governance in the district, sixty-five percent (65%) of the interviewed officials highlighted that the municipality lacks implementation of the policy. While some participants attributed this to financial issues, some indicated the municipality's strength and others as lack of political will to implement policy. This is echoed in the following excerpts below by one of the officials who highlighted that:

"We have strong policies that guide our operations as a Water Service Authority, but our implementation is poor as a municipality. We don't have enough funding to implement the policy."

"We have strong pro-social equity policies; however, we still lack implementation as there is a lack of political will to do so".

This finding confirms the UN-Water (2019) notion that policy needs to be informed by funding if the objectives are to be achieved (UN-Water, 2019:19). It further purports that poorly designed, inadequately implemented policies coupled with inefficient and improper use of financial resources fuel the persistence of inequities in the access to water services.

Therefore, it can be deduced that South African policies can realise human rights to water and sanitation. The aforementioned policies fully recognise human rights and have been found to contain the values of equality, fairness, and justice. Moreover, the policies align with the Human Rights-Based Approach and water governance principles such as participation, non-discrimination, transparency, and accountability. However, the differences in contextual backgrounds and developments affect municipal capacities to implement the policies, and as a result, this affects the level of service delivery, especially in underserved areas.

c) Theme 3: Strength of Water Service Authority's administrative scale

In determining the administrative scale of Amathole District Municipality, fifty percent of the officials highlighted that the municipality is not strong enough to fulfil its mandate of ensuring the realisation of the right to water and sanitation and equitable water service provision. This was expressed by one of the officials who commented that:

"We are failing as the municipality, and its administrative scale is not strong enough. We do not have funds, and we lack sufficient skills to perform our mandate".

Sixty-five percent further attributed this to the lack of financial capacity, sufficient skills, and poor and dilapidated infrastructure. As a result, some areas, especially those that have been previously destitute, remain unserved, as iterated in the excerpt below by one of the officials who commented that:

"The municipality does not have enough funding, the infrastructure is old, and it is poorly maintained. We don't have enough trucks and equipment to use, and this affects our service delivery".

This finding confirms the Municipal Service Strategic Assessment (MuSSA) findings held by the National Business Initiative (2017), which revealed that almost 80% of the South African Water Service Authorities are operating under threat and are in a critical state. As a result, this negatively impacts the realisation of the right to water and sanitation and ensures equitable water service provision.

In contrast, fifteen percent of the officials highlighted that the municipality is capable enough to achieve social equity and the right to water and sanitation. These officials further indicated that the municipality had established itself as a Water Service Authorities and WSP, enabling them to allocate the roles and responsibilities crucial in achieving social equity. Furthermore, officials and the field tour indications confirmed that the municipality had adopted a decentralisation approach as indicated by satellite offices established in each of its six local municipalities.

One official commented that:

"As Amathole, we have established ourselves as a Water Service Provider and as a Water Service Authority, and this assists us in performing our duties. We have also created satellite offices, and we have deployed more technicians on the ground who make sure that there is water 24/7".

"We are competent enough as the municipality. We have more qualified and experienced staff at Amathole, and even in these hard times that we are facing, we have never backed down from providing our services".

Indications were made that the municipality has restructured its organogram, resulting in more technical staff being deployed on the ground. More so, officials further highlighted that monitoring systems and Community-Based Organisations are being used to provide information on the ground.

One official highlighted that:

"We have employed more process controllers, engineers, and technicians to ensure there is reliable water service provision. However, we still lack sufficient skills at the necessary levels".

While there are contrasting views regarding the strength and state of the Water Service Authority in terms of achieving its mandate, the study established that the municipality's administrative scale needs to be strengthened if the right to water and sanitation and social equity is to be achieved. Furthermore, the study deduced that Amathole lacks financial capacity, and this is largely attributed to the fact that it is are grant dependent, and 60% of its population resides in rural areas. Financial implications result in infrastructural challenges and affect decision-making processes as project implementation is highly dependent on the funding available.

d) Theme 4: Alignment of government funding and municipal financial management in addressing social inequities in water governance

The UN-Water (2019) argued that poorly designed and inadequately implemented policies fuel the persistence of inequities in access to water services, and in addition, the inefficient and improper use of financial resources has dire consequences. Thus, policies must be backed by sufficient funding, supported by the adoption of sound financial management to ensure the realisation of the right to water and sanitation.

In determining the alignment of government funding in addressing the persistent inequalities in water governance, the study established that Amathole District Municipality is a grant-dependent municipality. Therefore, the municipality receives the Equitable Share Grant (Non-Conditional) in terms of the Division of Revenue Act (DORA), giving effect to Chapter 13 of the Constitution. In return, the municipality provides free basic water Service to those who fall under the indigent policy, thereby

addressing affordability concerns. However, indications of the inadequacy of the Equitable Share in addressing the municipality's financial concerns were made, and officials reflected its negative impact in ensuring the realisation of the human right to water and sanitation as purported by one of the officials interviewed in the extract below:

"We get the Equitable Share. However, it's not enough. 80% of it goes to salaries, and the remaining is not enough for operation and maintenance".

The finding was further confirmed by the Municipal Money (2020) report, which recorded an over-expenditure (81.1% overspent) of the operations budget in the year 2018/2019 (Municipal Money, 2020). The study further revealed that the municipality also receives other conditional grants such as the Municipal Infrastructure Grant (MIG) and the Rural Household Infrastructure Grant (RHIG). These grants are meant to fast-track the delivery of clean water to the communities without access to water services and provide sanitation services for the rural households where piped infrastructure is not possible, respectively (Oosthuizen and Thornhill, 2017:7).

One of the officials commented that:

"Apart from the Equitable Share, we also receive other grants such as the Municipal Infrastructure Grant and the Rural Household Infrastructure Grant. They do, however, come with conditions, and if those terms are not met, the money cannot be utilized; otherwise, the audit report would show some unlawful, wasteful, or irregular expenditure."

Another official highlighted that:

We receive funding from the Department of Water and Sanitation; however, its framework for how to use the funds is heavily regulated; for example, if we are doing water sampling and notice a broken pipe, we are not allowed to repair it because it will be recorded as operation and maintenance, and you will see that testing the water without repairing the pipe could result in compromised results".

Challenges imposed by the above-mentioned conditional grants were further confirmed by Municipal Money (2020) which reported an under expenditure (minus 121.2% underspent) of the capital budget in the financial year 2018/2019 (Municipal Money, 2020). Therefore, the study discovered that, despite the municipality's dire need for funds, it fails to properly utilise its capital budget, which is attributable to funding conditions. Conditional grants, such as the Municipal Infrastructure Grants (MIG), are distributed to certain municipalities based on a formula and are intended to supplement the Equitable Share Grant. While this is the case, the failure to utilize these grants is not unique to Amathole District Municipality but reflects what obtains in most Water Service Authorities in the country.

This finding resonates with a study by Sutcliffe and Bannister (2020), which indicated that most of the municipalities failed to spend approximately 14% of their Municipal Infrastructure Grant (R9.9billion of their MIG budget) (Sutcliffe and Bannister, 2020). As a result, Cooperative Governance and Traditional Affairs (CoGTA) then established the Municipal Infrastructure Support Agency (MISA), which served the main purpose of addressing capacity challenges through assisting municipalities in planning, management, and other technical expertise to roll out infrastructure more efficiently and effectively. However, despite the measures taken to assist municipalities, there are still obstacles in utilising the grants, as demonstrated by the case of Amathole District Municipality.

Apart from government funding, the study established that the municipality also generates its own revenue through the adoption of a fixed rate for water services across the district. This is reflected in the sentiment echoed below by one of the officials who said that:

"*We have a fixed rate across the six municipalities, and once you exhaust the free basic water, you are then billed".*

While the above findings were mostly related to the municipality's financial sources, the study also indicated that the municipality's expenditures are guided by a solid framework such as the MFMA (Act No 56 of 2003), which stipulates the management of the municipal finances. The study also indicated that processes are in place to

guarantee that the Water Service Authorities are responsive and responsible and that they create accountability and transparency, which is consistent with the Human Rights-Based Approach. When commenting on the above matter, one official commented that:

"The MFMA advises us on how to spend the money; for example, we have Supply Chain Management and budgeting standards that we follow."

Another official interviewed said that:

"There are processes to be followed when we fail to fully utilise our capital budget, we have to apply for the rollover of funds from the National Treasury, and it takes time as they also follow a certain framework on whether to roll over the fund or not".

While it is true that there has been a lack of accountability and corruption in local government (Sutcliffe and Bannister, 2020) and that a sound regulatory framework is required to establish transparency, accountability, procedural justice, policy and legislation must be flexible and administratively enforceable. The UN-Water (2019) further warned that excessive regulation and rigid conformity to formal rules, which tend to coincide with bureaucratic inertia, can increase transaction costs, discourage investments, and potentially derail or hinder water management reforms. Thus, rigid and overly legalistic legislations and regulations in water governance are self-defeating.

In essence, while many countries have adopted the Sustainable Development Goals for water and sanitation, success will vary across states, countries, and Water Service Authorities, and this will be attributed to the amount of funding allocated to ensure the realisation of the human right to water and sanitation. Addressing water disparities in contexts such as Amathole, in which 60% of its communities are in rural areas, implies more costs due to the technical nature of servicing these areas and limited municipal revenue generation. This is largely attributed to shared communal standpipes, which makes it difficult or rather impossible to bill the water even if the minimum prescribed standard is reached, high rate of poverty and huge unemployment, among other reasons. Thus, huge investments from the private

sector and Non-Governmental Organisations and communities and donors are needed to address the existing disparities.

The study observed that the South African government has set aside funding which is meant to address the disparities in water governance, and over time this (local government transfers) have grown more than ten-fold in real terms throughout 1998/99 to 2017/18, totalling over an R120billion (Sutcliffe and Bannister, 2020:43). Sutcliffe and Bannister (2020) further argued that combined with its revenues, total revenue for the local government now compromises 25% of the total government expenditure. While this constitutes a substantial commitment to decentralisation, the findings presented indicated that the inadequacy of the central government funding in ensuring the realisation of the right to water and sanitation should not be undermined. Finally, funding should be accompanied by capacity investments to ensure that the municipalities can utilise the funding effectively and efficiently to establish procedural justice and ensure that everyone has access to water services.

e) Theme 5: Capacitation of communities to address water disparities

Civil society plays a crucial role in addressing water inequities amongst communities that are most affected by these disparities. International Water Resource Association (IWRA) (2019) attributed the lack of access to water services to injustices and human actions (IWRA, 2019). It is therefore important to ensure capacity investment in the communities to ensure justice water distribution. It is upon this premise that the study established that the municipality has stopped engaging in educational and awareness campaigns due to financial constraints. However, the Human Rights-Based Approach argues that the local community capacities should be strengthened, and the right to water and sanitation should be promoted for both rights holders and duty bearers.

One official interviewed noted that:

"The municipality used to hold these campaigns twice a year. It was done through visiting schools and doing save water campaigns, among other activities. However, these programs have been side-lined because of the financial status of the

municipality, and we are prioritizing service delivery over other things; hence they have not been done".

Another official commented that:

"We used to go to schools and do save water campaigns and educational programs, for example, sanitary disposal education; however, we are no longer doing that because of limited funding".

On the same note, the focus groups discussions held indicated that they have never witnessed nor attended any awareness campaigns in their communities, and this is highlighted below:

" We have never experienced anything of that sought".(Focus group participant)

All participants from both the academia, focus groups, and officials agreed that there is a need to engage in these community investments to make communities aware of the importance of water and the consequences in access to water service by others. This is reflected in the following excerpts below by of the officials who commented that:

"I think we need to improve and invest in that area more".

Another official commented that:

"It is true, more needs to be done, and there is still room for improvement in that area by the municipality".

1.27.2 Social inequities in basic water service provision in Amathole District Municipality

In answering the research question, "What social inequities exist in basic water service provision in Amathole District Municipality"?, four themes emerged in relation to the National Academy of Public Administration (NAPA) criteria of measuring social equity: the distribution and access to water services, consistency of processes in water services provision, impacts of interventions in basic water service provision, and the fairness of procedures adopted in water service provision.

a) Theme 1: Distribution of water services (Access Equity)

Access equity is about the distribution of services, and it is about who gets services and who does not. In determining access equity, the study established that a significant number of people in Amathole District Municipality still lack access to safe drinking water and proper sanitation. Secondary data interrogated highlighted the unequal distribution of water services across and within the six local municipalities under Amathole District Municipality as reported in the 2019/2020 Integrated Development Plan.

Table 0.4: Access to sanitation across the six local municipalities in Amathole District Municipality by type (2018)

Local municipality	Flush toilet	Ventilated Improved Pit	Pit toilet	Bucket system	No toilet	Total
Mbashe	5640	37300	9940	207	15300	**68400**
Mnquma	17200	32900	16600	509	5390	**72900**
Great Kei	2440	3190	1580	91	1510	**8820**
Amahlati	6620	11200	9730	162	1930	**29600**
Ngqushwa	1720	12600	5230	24	454	**20100**
Raymond Mhlaba	22700	10800	9780	863	1630	**45700**
Total	**56272**	**108032**	**53201**	**1855**	**26253**	**245612**

Source: Amathole District Municipality IDP (2020/2021:85)

Sanitation in Amathole District Municipality is categorised into five sections, namely; no toilet (does not fit any of the categories), bucket system (a top structure with a seat cover over a bucket), pit toilet (a top structure over a pit), Ventilated Improved Pit (VIP) (a pit toilet but with a fly screen and vented by a pipe) and flush toilet (waste if flushed into an enclosed tank, thus preventing the waste to flow into the surrounding environment)(IDP, PAGE 84). From data presented above in Table 4. 4, 22.91% of the total households have access to flush toilets, 43,98% have access to VIPs, 21.66% are still using pit toilets, while 0.75% the bucket system and 21.66% are considered not to have a toilet from the definition provided by the municipality (Page 84.IDP). In terms of progress in the backlog, indications show that the sanitation backlog had been decreasing at a very slow rate (-6.23%) from 155 000 in 2008 to 81 300 in 2018.

Table 0.5: Water service distribution in Amathole District municipality by source across the six local municipalities, 2018

Local municipality	Piped water inside the dwelling	Piped water inside in yard	Communal piped water less than 200m from dwelling (at RDP Level	Communal piped water less than 200m from dwelling (at RDP Level	No formal piped water	Total
Mbashe	9890	3600	14600	2040	38300	**68400**
Mnquma	15400	4790	20900	8370	23500	**72900**
Great Kei	1160	2460	2490	1200	1510	**8820**
Amahlati	3840	7430	10200	2970	5240	**29600**
Ngqushwa	1670	2880	10400	3050	2070	**20100**
Raymond Mhlaba	10400	11700	15800	4440	3430	**45700**
Total	**42340**	**32876**	**74315**	**22064**	**74017**	**245612**

Source: Amathole District Municipality Integrated Development Plan (2020/2021:86)

In terms of access to safe drinking water, 17.24% of the households have piped water inside the dwelling, 13.39% have water inside the yard, a total of 30.14% has no formal piped water, while 8.89% share communal piped water within a distance of more than 200m (below RDP) and 30.25% share communal piped water less than 200m from the dwelling (at RDP level). In terms of the backlog, Amathole District Municipality revealed that there had been a slight decrease of -2.62% per annum is from 125000 in 2008 to 96 100 in 2018 (Amathole District Municipality, 2020:87).

While the above tables reflect disparities in both access to water and sanitation across the six local municipalities, empirical evidence from this study further revealed that most of these inequities are concentrated in the rural areas as compared to the urban areas; hence the large rural-urban gap that remains present in terms of service provision in Amathole District Municipality. Sixty percent of the officials interviewed highlighted that those residing in urban areas have better access to water services than those residing in rural areas and informal settlements.

One Amathole District Municipality official highlighted that:

"It is difficult to service rural areas than urban areas, and as such, you will find out that there is always better service delivery in urban areas".

Responses from officials were also confirmed by the focus group discussions held in which participants highlighted that:

"There is better service delivery in urban areas than in rural areas".

Another focus group participant commented that:

"We rarely experience water issues in urban areas, but rural areas are struggling".

While another focus group participant highlighted that:

"In urban areas, normally those in informal settlements face water challenges than those residing informal settlements".

During the field tour, the researcher corroborated participants' views from focus groups by observing community people from a nearby hamlet obtaining water at the fence at the water treatment plant that was visited, as shown in Fig. 4.1 below. During the tour, the researcher also detected that while the village under observation was closer to the water treatment plant, its community members did not have access to a formal water source, and as such, they had to poach water directly from the treatment plant, a move which the researcher deemed high risk and unsafe for both the municipality and the villagers.

Figure 0.1: Rural community member poaching from one of the water treatment plants

Source: The Researcher (2021)

Focus group discussions conducted also revealed that due to lack of access to water services, rural areas highly depend on alternative sources of water, and in most cases, these are dams and rivers, and those who feel it is not safe and clean will practice water harvesting. This is highlighted in the following excerpts below by one focus group participant who commented that:

"There are only three shared communal standpipes in our community which are not enough to serve us all, and worse off, they are not reliable. So, as a result, we fetch water from the rivers, and for those who feel it's not safe and unclean, they do water harvesting. It is a difficult situation because in some cases we share these rivers with animals".

While another focus group participant commented that:

"There are water schemes set in our village, but there is no running water from the taps. This has been going on for about four years now".

Contrary, five percent of the officials interviewed indicated that in most cases, the issue of operation and maintenance determines access equity rather than the geographical location as one of the officials highlighted that:

"The distribution is fair, but it is the issue of operation and maintenance that affects access to water services. For instance, you can hear people in towns complaining about water quality while those in rural areas are satisfied by their service".

While contradicting views emerged from the empirical findings, the study observed that geographical disparities heavily influence social inequities in water provision, and those residing in rural areas are the most prone and vulnerable. This finding coincides with the UN-Water (2019:15) dimensions of access equity, which emphasised the need to address geographical disparities, affordability concerns, and the recognition of vulnerable and marginalised groups to address access equity. Therefore, this study established that geographical disparities in Amathole affect water inequities. While this may be attributed to the huge costs associated with servicing the rural areas as compared to urban areas, it is also linked with the issue of the demographic status of the municipality, which is associated with high poverty and a huge unemployment rate and that a huge proportion (60%) of the

municipality's population resides in rural areas. Either way, these seem to be fuelling these disparities. Furthermore, the reliance on other water sources such as natural sources rather than municipal water by rural areas also reflects the unequal distribution of water services and the persistent water inequities in Amathole District Municipality.

b) Theme 2: Consistency in water service provision (Quality Equity)

Consistency in water service provision also highly determines social inequities within a municipality and its community. This assertion was also noted by Johnson and Svara (2011), who refer to this as quality equity, which also relates to processing equity. Johnson and Svara (2011) further noted that process or quality equity calls for a level of consistency to be upheld regarding the quality of services provided to communities regardless of the distributional criteria used (Johnson and Svara, 2011:21). In determining quality equity, the researcher explored the consistency in water sources and interventions employed in Amathole District Municipality. The focus groups conducted reflected that rivers and water harvesting have been the main water sources in most rural areas; however, drought has challenged these sources.

One focus group participant highlighted that:

"We fetch water from rivers, except for those who believe it is unclean, risky, or too far away, in which case we utilize other methods such as water harvesting, although rivers are used by the majority. However, the challenge is that there has been drought and the water levels are low, and it has become a challenge again to have access to water".

Figure 0.2: Water harvesting tanks installed and are challenged by drought

Source: The Researcher (2021)

The municipality has intervened by filling tanks in communities without water through water carting, according to participants in the focus group discussions. However, indications were made that there was no consistency in doing so, particularly in the rural areas, and this is echoed in the following sentiment below by one focus group participant who commented that:

"The tanks are not filled consistently, and they can go for weeks and months without being filled".

One of the councillors interviewed blamed the lack of uniformity on insufficient equipment and a shortage of water carting trucks to assure service reliability and consistency. This is highlighted in the following excerpt below:

"In our local municipality, there are only four water carting vehicles that must serve 23 wards. Therefore, one truck must serve approximately six wards, limiting the impact of service delivery".

While water provision levels are limited in rural areas, empirical evidence from urban areas indicated otherwise. Participants from focus groups and the officials interviewed indicated consistency in quality and processes in water service provision in urban areas. Indications made highlighted that water interruptions in urban areas

were minimum coupled with constant timely communication in case of interruptions. More so, tanks were always filled because of better water service provision in these formal towns as they were rarely used.

One focus group participant commented that:

"There is always water in our town, and if there is going to be some interruption, they tell us on time so that we prepare. We rarely utilize water from the tanks in some cases as there is always running water on the taps".

While one of the officials highlighted that:

"The level of water interruption is limited in urban areas, and the municipality always makes sure that there is a communication when water is going to be interrupted, and this is easy because of the urban setup as compared to the rural areas".

Therefore, the study concluded that water disparities continue to be a problem, with those living in rural areas being the most vulnerable due to a variety of issues limiting basic water service availability in their areas. Variations in water provision consistency between urban and rural areas further highlight the persistent social inequities and the ever-present rural-urban gap in basic water service provision.

c) Theme 3: Impacts of interventions (Outcome Equity)

All of the interviewees agreed that the Amathole District Municipality, with the help of the Department of Water and Sanitation and Amatola, has been intervening during the drought and the recent COVID 19 issue by building dams and supplying tankers with water on a regular basis. This is highlighted in the following excerpt below by one official who highlighted that:

"There are several interventions we have embarked on which include drilling of boreholes, the construction of dams and refurbishment of water treatment plants and water carting to communities which do not have the infrastructure".

And one focus group participant commented that:

"There have been tanks supplying water and a dam that is under construction in our area."

Having established that various programs and interventions have been implemented to address access to water services in the district, Johnson and Svara (2011) argue that it is not the number of programs that matters but their impact that determines outcome equity.

To determine the impact of the interventions mentioned above, sixty per cent of the officials interviewed agreed that boreholes drilled assisted communities during the persistent drought. However, thirty-five per cent of these officials further highlighted that the intervention has been unsustainable, especially during the drought season, yet it has cost the municipality millions. As a result, those communities were left vulnerable and without access to safe and reliable water services.

One official purported that:

" We drilled several boreholes in the district, but they have proven to be unsustainable during the drought period".

This finding was further confirmed through focus group discussions with participants highlighting that there is no water at the boreholes.

One focus group participant highlighted that:

"*There are boreholes in our village, but they do not produce water".*

The study also indicated that the municipality had spent a significant amount of money on water systems in rural areas where there is a lack of access to water services and where residents have been disadvantaged. However, it appears that, while the initiatives were finished, they did not effectively solve the needs of the communities. When commenting on this issue, one of the officials commented that:

"*There are several projects that were completed almost four years ago, but there is no water running in the taps, and those communities still resort to rivers despite the implementation of the scheme".*

The impact of such programs is limited because they do not affect the situation of water service provision in such communities; as a result, those who are supposed to be served by these schemes remain unserved and without access to water. The study also observed that water tankers and water carting were part of the

interventions in the district, and these have had a positive impact on the communities, especially during the current COVID 19 pandemic. This finding confirms the observations made in the Global Lancet report (2020), which recognized tremendous improvement in sanitation facilities and indicated that "some African governments, as part of their COVID-19 response plans, took urgent steps to make clean water accessible to all communities by drilling boreholes and mobilizing water tankers to supply water" (The Lancet Global Health, 2020). However, addressing disparities in water service provision calls for more sustainable and reliable strategies to be adopted in these disadvantaged communities. This is echoed in the following sentiment by one focus group participant who noted that:

" *We are relying on water carts and tankers. However, they are not enough, but they have assisted us during difficult times".*

While the findings above reveal that the adopted intervention has had a partial positive impact in these disadvantaged communities, the question remains whether these strategies can ensure reliable, sufficient, and sustainable water service provision. The finding further complements The Lancet Global Health (2020) study, which questioned whether COVID 19 marks a step-change in the urgency with which the international community addresses these challenges.

d) Theme 4: Fairness of processes and procedures in water service provision (Procedural Fairness)

Sustainable Development Goal (Goal number 6) strongly emphasises the "principle of fairness of access" and provides a gloomy picture of the looming problem of inequality that needs to be addressed in terms of access (Bayu *et al.,* 2020:2). Interestingly, various theorists have different opinions regarding procedural equity. For instance, John Rawls (1971) claims that one's background should not unduly influence the benefits received and that distributive justice should ensure that the distributions are fair and to everyone's advantage. On the other hand, Robert Nozick (n.d) in Maiese (2020) believes that distributive justice comes with following rules in acquiring and transferring resources and benefits; hence distributive justice aims to ensure a fair exchange process (Maiese, 2020). While this is the case, this study

maintains that both the processes and outcomes are paramount in achieving social equity in water governance. Fairness, justice, and equality are the core components of social equity; hence it is crucial to ensure that the distribution process is fair for people to feel that they have received a fair outcome. Thus, distributive justice remains intrinsically linked to procedural justice.

The researcher examined stakeholder participation and adherence to governance principles of openness and accountability, as these are two tools used to ensure procedural fairness. This action was in line with Rodina *et al.*, (2017), who argued that procedural justice calls for platforms in which municipal officials, civil society, public and private cooperation involved in water governance actively negotiate on values, policies, practices, and decisions, accounting for losses incurred and being accountable (Rodina *et al.,* 2017).

Regarding stakeholder involvement, the study established that various platforms had been created to ensure collaboration and consultations and the involvement of various stakeholders in Amathole District Municipality.

One official highlighted that:

"*We involve our stakeholders through the Integrated Development Plan (IDP) process, and we make sure that our communities and stakeholders are fully represented during the process and that their needs and inputs are considered".*

Another official commented that:

"Apart from the use of the Integrated Development Plan (IDP) process to include our stakeholders, we have Project Steering Committees and Community Labour Organisations which are selected from the communities where the projects will be implemented. We also have ward councillors and Inter-governmental Relations (IGR) to make sure that other spheres are involved".

Furthermore, officials further highlighted that they do collaborations and have signed some Memorandum of Understanding with various institutions to strengthen their relationships. This is highlighted below as one of the officials commented that:

"We have signed Memorandum of Understandings (MOUs) with the University of Fort Hare and Water Sisulu University, and we have done some collaboration with CSIR ".

Observations made in the study revealed that various supporting bodies such as the South African Local Government Association (SALGA) and Provincial and National CoGTA were involved in Amathole District Municipality water governance through support and oversight. The Municipal Manager further confirmed these revelations during the Amathole District Municipality and CoGTA parliamentary Session held on the 31st of April 2021, where he indicated that reports are regularly submitted to the Provincial and National CoGTA to ensure transparency and reporting. Secondary data also indicated that the municipality had set core values: selflessness, pro-poor, responsiveness, transformative, inclusivity, dignity and respect, good work ethics and transparency, integrity, and accountability (Amathole District Municipality, 2019:13). Regular reporting, council supervision, and the use of annual reports to ensure transparency and involve other stakeholders were also highlighted.

One official highlighted that: "*We do annual reporting to communicate what we have managed to accomplish every year".*

While the above finding reflects the mechanisms used to establish procedural fairness in Amathole District Municipality, the effectiveness and compliance in ensuring transparency and accountability remain in question. These contestations emerged after some of the officials indicated that:

"I think the municipality should do the Integrated Development Plan (IDP) to take community needs into account, not as a formality".

While another official highlighted that:

"We do Integrated Development Plan (IDP) and Budget roadshows although very little considerations are considered because of the limited budget".

This finding concurs with Sutcliffe and Bannister's (2020) report on local government, which revealed that "whilst all the municipalities have produced *Integrated Development Plan (IDP)*, municipalities do not usually implement even the programs and projects that have been budgeted for. Furthermore, Sutcliffe and

Bannister (2020) argued that *Integrated Development Plan (IDP)* tend to bureaucratize the democratic process rather than deepen it and often become a shopping list rather than a long-term vision of the development of the municipal area" (Sutcliffe and Bannister, 2020:9).

Therefore, the study established that while planning in water governance requires community involvement, communities rarely get to debate the specific projects and medium-term processes that will transform their neighbourhoods. When coupled with time, competencies, and money required by development, their frustrations and poor service delivery are compounded (Sutcliffe and Bannister, 2020:10). As a result, social inequities remain present as the voices of those in need remain unheard and their communities unserved.

Regarding the involvement of local communities, the study established the need to improve district and local municipality integration as one of the local municipality representatives commented that:

"We are only involved and taken on board by the district municipality when they have projects that they want to implement in our municipality. However, I feel that the integration should be improved between the district and the local municipality".

On the other hand, officials from the district municipality highlighted that:

"Our mandate to deliver water is greatly dependent on local municipality collaboration; for example, we needed to offer water in one of the rural communities in the peri-urban, but in order to do so, we needed an access road, which is a local municipality responsibility. So we had to build a makeshift access road, which was a disaster after five years, but we still have to go there to maintain the water infrastructure".

The statement above further affirms Sutcliffe and Bannister's (2020) findings that the two-tier system still comes with challenges and that tensions between local and district governments continue to jeopardize local government operations and project delivery. Unfortunately, the same difficulties exist in terms of duty division across levels, resulting in project implementation delays, which may be traced back to inadequate coordination and lack of consultation. As a result, the importance of

strengthening intergovernmental coordination and oversight by political-administrative leadership cannot be overstated.

Furthermore, ten percent of Amathole District Municipality officials stated that cooperation with universities is necessary because the relationship appears to be only on paper.

One of the Amathole District Municipality officials stated that:

" I wish that the relationship between the municipality and universities can become a reality and help the community served, rather than merely a paper relationship".

Other findings indicated that the use of councillors to ensure community representation, accountability, and information sharing was revealed to be weak, with one focus participant highlighting that:

"We don't even know the councillor in our village, maybe he or she goes to other villages, but as for us, we haven't seen her/him village …".

This assertion was also noted by Sutcliffe and Bannister (2020:44), who purported those challenges in local government participation are associated with limited knowledge on how to participate and access ward councillors, inaccessibility of local government officials and structures, and these have resulted in disillusionment, protests, and violence.

One focus group participant commented that:

"*It is only after we ask about why projects are taking forever that they bring out the challenges involved with the implementation of the projects".*

Other stakeholders interviewed also revealed that the municipality lacks transparency and accountability in its operations by stating that:

" The municipality is not forthcoming if it's not able to pay for services rendered and it doesn't honour its agreements on time".

Furthermore, the failure of the municipality to implement consequence management further raises questions regarding their upholding of the principle of accountability and transparency. More so, failure by the municipality to submit relevant documents

for auditing as indicated by the disclaimer audit report in the year 2018/2019 as well as the persistent qualified audit reports received by the municipality (2016-2017 and 2017-2018) (Municipal Money, 2020) put the principle of accountability and transparency in question.

Therefore, this finding revealed that social inequities are still present in Amathole District Municipality since it still lags in fully establishing procedural fairness in its water governance. The researcher also noted that whilst governance principles have been set, translating them into action remains a challenge in the municipality. In essence, the municipality still lacks in fully incorporating stakeholder involvement in its water governance. However, tackling social inequities and strengthening water governance requires more than just engaging communities; it also necessitates a more thorough consideration of and development of systems that promote transparent and fair negotiation (Förster *et al.,* 2017:8).

1.27.3 Factors affecting water governance and social equity and their impact on water service provision in Amathole District Municipality

Water governance and social justice in Amathole District Municipality are influenced by environmental, economic, socio-economic, and institutional capacity and governance issues, according to the study.

Table 0.6: Factors affecting water governance and social equity in Amathole District Municipality

FACTORS AFFECTING WATER GOVERNANCE AND SOCIAL EQUITY IN ADM	
ENVIRONMENTAL FACTORS ▪ Water resource availability ▪ Technical nature of rural areas	**INSTITUTIONAL CAPACITY AND GOVERNANCE FACTORS** ▪ Political interference ▪ Lack of policy implementation ▪ Structural Challenges and skills deficit
SOCIO-ECONOMIC FACTORS ▪ Illegal connections ▪ Lack of understanding on the critical importance of water and water inequities by communities	**ECONOMIC FACTORS** ▪ Infrastructural challenges ▪ Insufficient revenue ▪ Financial mismanagement

Source: The Researcher (2021)

a) Theme 1: Environmental factors

a) Water resource availability

The study established that low rainfall patterns have resulted in drought, which has subsequently affected water provision in Amathole District Municipality. Sixty percentage of the officials interviewed stated that this had put pressure on water supply and management. Additional measures, such as water tankers and water carting, were indicated as necessary to provide uninterrupted water delivery in various portions of the district. However, despite their efforts, many households have been left with no water. More so, in the 2019/2020 Annual Report, the Municipal Manager of Amathole District Municipality indicated that:

" The drought has affected Amathole District Municipality since 2015 and has continued to negatively affect the water supply in several areas across the district" (Amathole District Municipality, 2020).

While another official from Amathole District Municipality commented that:

"The dam levels are always low, and in most cases, they are at 20%, which affects the quantity and availability of water to the communities".

Figure 0.3: One of the Amathole Dams at 20%

Source: The Researcher (2021)

This claim was also similar to responses received from participants during focus group discussions conducted, who indicated that the communities rely on natural water sources that have dried up, leaving those communities threatened and

vulnerable. This is echoed in the following sentiment below by one focus group participant who highlighted that:

"*Drought has increased water problems for us. We used to harvest our water for day-to-day use, but because of the low rainfall, it's no longer possible, and some rivers we used to fetch water from have dried up".*

The impact of drought has led to more people failing to access water services. It has increased the demand for water by communities to meet basic needs and cater for their crops and animals in Amathole District Municipality. Some people are denied access to water as a result of these actions, raising the extent of inequities in water availability. This finding confirms Romano and Akhmouch's (2019:4) observation that megatrends such as population growth and climate change greatly impact water governance decisions as they exacerbate the competitor between water users (Romano and Akhmouch, 2019:4).

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. One respondent from academia, when commenting on this issue, noted that:

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

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. He argued that the lack of coordination in drought mitigation programs and lack of policy implementation on better risk management when dealing with disasters such as droughts makes the impact unbearable (Makaya *et al.*, 2020:534). 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 that afflicted different parts of the country was prolonged and could be traced back to 2015. The same case could be related to

Amathole District Municipality. However, Enqvist and Ziervogel (2019) further highlighted that it was the city's response to water shortages that highly determined the drought severity.

Although the respondents showed differing opinions regarding the impact of drought, the study established 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 have to spend long hours travelling or waiting in queues to fetch water. These assertations were further noted by the Human Right 2 water (2021:16) report, which indicated that lack of clean and adequate water services negatively impacts other vital needs for life and economic and social wellbeing.

ii) Technical nature of rural areas

As if it is enough that South Africa is a water-scarce country which makes access to water a challenge, the country's human settlement patterns were developed around mineral deposits creating geographical inertia and incompatibility between water demand and water availability (Wrisdale *et al.*, 2017:10). Van Koopen and Jha (2005) further argued that 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 (Van Koppen and Jha, 2005). Against this background, the technical nature of rural areas emerged among the factors affecting water governance in Amathole District Municipality. Sixty-five percent of the participants interviewed indicated that Amathole District Municipality is a rural municipality, and as a result, its water governance and the level of service provision is affected in most of its communities. Empirical data collected from municipal reports further indicated that the areas in which social inequities are still prevalent are the rural areas compared to the few towns in the district. The situation has been attributed to the technical nature of servicing rural areas. Like others, Amathole District Municipality rural areas are scattered with a low population to be served.

One of Amathole District Municipality officials highlighted that:

"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."

The study also established that servicing rural areas entails huge costs, and this is highly dependent on economies of scale, putting a strain on already limited resources. More so, officials indicated that the fixed and variable costs associated with water service provision present huge barriers, especially when dealing with scattered rural areas. Furthermore, councillors interviewed further indicated that it's difficult to ensure effective communication in the rural areas because of their geographical spacing.

Amathole District Municipality official commented that:

"It is easy to communicate and make announcements in towns and locations when there will be no water because houses are close together than in rural areas where houses are scattered".

This finding is consistent with UN-Water (2012:2019) and Jiwani and Antiporta's (2020) observations that rural areas are still lagging in terms of water provision, which is largely attributed to their technical nature, which includes a high rate of poverty, low population, and low levels of income, making it more difficult to serve. The focus group discussion held indicated that because of these characteristics, it is difficult for those residing in rural areas to explore safe and reliable alternative sources of water because of poverty and low income. As a result, people resort to convenient sources like rivers and dams, which do not require monetary values. In addition, the location and physical environment presented by the rural areas in Amathole District Municipality make it difficult for people residing in these areas to access water services and engage in essential occupations. This is highlighted in the following excerpts below by one focus group participant who said that:

"We do not have money to pay for water as we rely on social grants".

Another focus group participant commented that:

"In our community, there are only three communal standpipes which are not enough, and sometimes there is no running water. As an alternative, we have resorted to fetching water from the rivers, and for those with the financial means, they do water harvesting through the use of tankers".

While another focus group participant commented that*:*

"We travel long distances to look for water, and in some cases, our children have to skip school".

b) Theme 2: Institutional capacity and governance factors

The study established that institutional capacity and governance failures remain among the major concerns affecting service provision in South Africa. Citing the Parliamentary Monitoring Group conducted on July 27, 2012, the Auditor-General [South Africa] conclusions ascribed poor municipal performance to a lack of political will among the leadership to address the situation, no sanctions for non-performance, and a lack of requisite skills in municipalities (Parliamentary Monitoring Group, 2012). While this data appears to be a little out of date, it covers a critical moment in South African water governance and provides some insight into current water governance discussions in Water Service Authorities. According to empirical data from the Amathole District Municipality, these difficulties are still present in South African municipalities, and they continue to have a significant impact on the accomplishment of social equity in basic water provision.

i) Political interference

Participants interviewed identified political interference as one of the factors crippling water governance, especially in decision-making processes, thereby making the institutions vulnerable. This is articulated in the following excerpt below, where one of the officials commented:

"*In as much as we try competitive bidding to ensure that the process of awarding of tenders is flawless, there is always political interference in the final decision on who gets the tender".*

The finding confirms Adon and Simatele's (2021:516) observation that South African water institutions are highly associated with a lack of independence from political interference with ill-equipped resources and poorly defined or overlapping authorities. They further argue that these water institutions are not proactive in dealing with water challenges; rather, they are stuck in the conventional strategies of managing water resources and are manipulated by politicians (Adom and Simatele, 2021). Furthermore, Karodia and Weston (2002) in Adom and Simatele (2021:516) argued while water management plays a role, political and personal interests have controlled the daily operation in water institutions. Empirical evidence collected further confirms these assertions by revealing that there are various substandard and unfinished projects in Amathole District Municipality, which may be a product of political interference in awarding tenders. Therefore, the study established that political interference hinders successful project implementation, resulting in some areas failing to access water services.

ii) Lack of policy implementation

All participants interviewed highlighted that while the district municipality and South Africa have established a strong policy to guide water institutions and processes, the difficulty now is to fully implement the policies that are already in place. This was further noted by Bakker (2004) in Furlong (2012), who observed that reregulation is a highly contingent, constantly evolving process, involving" institutional learning" and "mediation", meanwhile Sancton (2009) in Furlong (2012:2725), argued that "regulation is in not a fait accompli: it is iterative and takes time for organisations to understand it and apply it to their advantage". In reaction to these assertions, one participant commented that:

"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, and as a result, another policy was created to legalize the illegal connections through the Rural House-Hold Connection Policy, but it's been a year now, and it has not been implemented".

The finding contradicts Adom and Simatele's (2021:517) conclusions that South African policies are fragmented, uncoordinated and unclear and silent on the administrative challenges worsening water quality and the steps needed to tackle these". 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. More so, participants further highlighted that the municipality fails to implement consequence management in the institution, compromising service delivery as highlighted below:

"*The consequence management is not being implemented and imagine what that does in terms of accountability issues".*

The finding confirms Sutcliffe and Bannister's (2020) 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, councillors and administrators who are often not readily accessible to the communities they serve (Sutcliffe and Bannister, 2020). It is, therefore, crucial to note that the effectiveness of a policy only lies in its implementation. Furthermore, Hudson *et al.*, (2019) argued 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. These assertions were also supported by Furlong's (2012:2726) observation that adjusting to regulation and the capacity to comply with it is highly affected by locally specific cultural and governance issues. Furthermore, the finding supports Adom and Simatele's (2021:513) findings that the post-Apartheid policies and strategies lack a clear direction of 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 as expressed in the following excerpt below:

"There is a lack of political will to implement policy, which has led to cadre deployment".

This finding also supports Enqvist and Ziervogel's (2019) assertion that addressing inequality in water governance is not only a matter of finding new technical solutions for piping water into the deprived areas and vulnerable groups but more broadly about political priorities which have catered for some groups over others. The study observed that lack of political will had harmed Amathole District Municipality water governance, greatly affecting the level of policy implementation, which in turn affects the level of development and service delivery. This is iterated by participants in the following excerpts below:

"Most of the policies are not being successfully implemented because there is lack of political will to ensure that everyone has access to water especially rural areas".

"The Rural Household Connection Policy has been in place for more than a year and has yet to be implemented."

The study backs up UN-(2019) 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. Furthermore, political interference and lack of political will lead to disastrous effects in water governance resulting in the widening gap between the "haves" and the "have nots". The realisation of 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.

iii) Structural challenge and skills deficit

During the Parliamentary Session held on the 13th of 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 allowing 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 at the ground and more people in the administration. Furthermore, thirty percent added 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 fulfil our main goal, which is providing water and sanitation".*

The finding is consistent with Adom and Simatele's (2021:514) study, which revealed that the water sector lacks people with professional skills and expertise despite overstaffing in the departments.

The impact of such a situation on water service cannot be understated, as 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 on a daily basis. Furthermore, all of the participants interviewed highlighted that the municipality has skilled staff; however they are not sufficient to ensure that effective and efficient water governance has resulted in high levels of consultancy. The finding further confirms Sutcliffe and Bannister's (2020:9) 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. Unfortunately, when the Municipal Demarcation Board reviewed the general competency of the personnel according to the minimum competency requirements set by National Treasure, eighteen (18) years later, they were still determined to be insufficient. One of the officials commented that:

"We have skilled staff, but we cannot do it on our own. There is a need for more consultancy when implementing projects as water and sanitation require various skills and competencies".

Another official commented that:

"We have skilled staff; however, we do not have the right skills at the right levels".

While another official commented that:

"We have to do a lot of consultation before and during our interventions".

The finding also confirms Romano and Akhmouch's (2019:6) 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. Furthermore, while the former is concerned with planning, accurate data, monitoring, and assessment, the latter is concerned with personnel, expertise, and managerial competencies. Therefore, water management in cities necessitates interdisciplinary skills as well as the ability to respond to emergencies. For example, establishing disaster-prevention measures and performing routine activities, all of which must be carried out per people's demands and in coordination with other policies and sectors.

Insufficient human resources and the requisite skills in the right positions in Amathole District Municipality has been attributed to the status of the municipality (Category C servicing rural areas mostly in its jurisdiction). More so, 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 (Mudombi and Montmasson-clair, 2020:11), resulting in inequities in water availability.

c) Theme 3: Socio-economic factors

Socio-economic factors also emerged as one of the factors affecting water governance and highly influencing social inequities in basic water provision in Amathole District Municipality, particularly in the rural areas.

i) Illegal connections

The study established that while other people still resort to natural sources where the municipality fails to provide water, others have resorted to stealing water through illegal connections. Sixty-five percent of the officials highlighted that there are high levels of illegal connections in Amathole District Municipality rural areas. As

a result, several villages, particularly those in the upper areas, are left without access to water. This is noted by one official who articulated that:

"*There are individuals who are opening up ridges and velds to channel water to their areas so that they can irrigate their crops and have water for their animals".*

While this is true in Amathole 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 the unfairness and obstruct universal water access. Moreover, illegal connections hinder access to water by other community members and put pressure on the infrastructure on the water schemes as they are built to cater for certain capacities. As a result, illegal connections put pressure on the infrastructure, which will, in turn, affect water provision in some communities. This is highlighted in the following excerpts below, where officials commented that:

"*Most of the existing water schemes were designed depending on the set up of the areas, and now because of illegal connections, they cannot meet the demand and pressure, and as such it poses a challenge".*

Another official commented that:

"*We always fill up the reservoirs, but you still hear that there is no water in such a community, the communities are inconsiderate of others, imagine 1500l of water are taken along the way through illegal connections".*

ii) Lack of understanding on 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. All of the officials interviewed highlighted that there is still a 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, and this is reflected in the sentiment below where one of the officials commented that:

"The communities still lack understanding on how critical the issue of water is, the level of theft, vandalism and illegal connections shows that there is need for more education so that they understand that people are suffering because of their actions".

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

"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".

Communities have a critical role to play 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 move towards achieving equitable access to water services.

d) Theme 4: Economic factors

Two sub-themes emerged under the economic factors, and these included infrastructural challenges and financial issues.

i) Infrastructural challenges

Based on the empirical data collected through focus group discussions and interviews conducted, the study 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 and Akhmouch's (2019:2) assertion that obsolete and lack of infrastructure presents the main challenge of future water management. The study pointed out that Amathole District Municipality is presently functioning with worn, old, and poorly maintained infrastructure, resulting in

unreliable, unsafe, insufficient, and unequal access to water services. This is articulated below by one participant who highlighted that:

"*Like other municipalities in South Africa, Amathole District Municipality's infrastructure is dilapidated and aged, and this greatly affects water service provision".*

The state of infrastructure in water provision requires huge investment in operation and maintenance if sustainability is to be ensured, and yet Amathole District Municipality is facing huge challenges in the operation and maintenance of its infrastructure. Furthermore, Chatiza (2016) in Maramura (2018) 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 (Maramura, 2018:141). The study also revealed that the municipality is underpinned by constant burst 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, as highlighted in the following excerpts below:

"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 which 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 and M is at 2% against the National Standard set at 8%".

The finding aligns with the Auditor General's [South Africa] (2020) findings, which revealed many flaws in the infrastructure construction and maintenance process. 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 given to water services infrastructure, water and sanitation within South African municipalities.

On top of the poorly maintained, old, and dilapidated infrastructure, the study also revealed that Amathole District Municipality infrastructure is highly challenged with 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 (2020) report, which indicated that 36% of the water institutions disclosed water losses for more than 30%, and the overall water losses disclosed amounted to R6.56billion (Auditor-General [South Africa] (AGSA), 2020:24). Meanwhile, Adom and Simatele (2021:517) also noted that about a quarter billion of non-billed water is lost annually through leakages due to burst pipes and collapsing infrastructure. One of the officials commented that:

Figure 0.4: Leaking communal pipe in Amathole Water treatment plant

Source: The Researcher (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."

Furthermore, participants indicated that Amathole District Municipality has insufficient trucks to service all areas due to a shortage of taps and water tankers to meet the current demand. In addition, the district does not have generators to ensure that there is water during load shedding and electrical faults. During the researcher's tour, one of the communities had no water since there was no electricity. As a result, it is vulnerable, and those that depend on municipal water will suffer.

One of the councillors highlighted that:

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

Lastly, all of the officials interviewed highlighted that the district has limited water sources, and such a scenario affects the quantities of water that can be stored, especially during the drought season. These assertions were also supported by the focus group discussions conducted where one of the participants commented that:

Figure 0.5: Temporary dam constructed in 2012; however, there is no hope for it to be upgraded

Source: The Researcher (2021)

"We don't have a water source in our municipality, so for now, we are hoping that the dam construction in progress will lead to improved access to water".

While one of the interviewed officials highlighted that:

"Amathole District Municipality has limited water sources and reservoirs to meet its current demand, so even if we fill their current reservoirs, the water might not be enough to meet their current needs".

This finding is consistent with Romano and Akhmouch's (2019:4) observation that the water sector is highly capital intensive and requires huge investment for infrastructure and development. Furthermore, they indicated that ageing infrastructure negatively impacts efficiency and increases operating costs due to leakages.

ii) Municipal Financing: Insufficient revenues

One of the major misconceptions about the Human Rights-Based Approach is that the right to water 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 the municipal revenues and service provision as providing water services entails huge costs.

One of the officials interviewed commented that:

"*Water is never free, and it will never be free; someone is always incurring costs and paying for the water that is considered free by those who receive it".*

Therefore, the study revealed that Amathole District 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, as highlighted by one official who articulated that:

"The main challenge is a lack of money, and it is difficult to do any development without funding".

Various legislation in South Africa provides for municipal financings, such as Section 229 of the Constitution, which assigns the authority to raise its revenue through property rates and surcharges for services delivered. The Municipal Fiscal Powers and Functions Act (Act No 12 of 2007) further defines the surcharges as the excess of the municipal base tariff that a municipality may impose on fees for a municipal service rendered by or on behalf of a municipality. Municipalities should therefore ensure clients are billed; it has collected all of the money that is owed to it, and that credit management and debt collection policy is adopted, maintained, and implemented. These activities should adhere to Section 95 and 96 of the Municipal Systems Act's (Act No 32 of 2000) rates and tariffs. Even though the legislation provides for municipalities to collect their revenue, the study revealed that the municipality fails to collect its revenue, and the collection rate is way below the national standard, as articulated in the excerpts below:

"Our average collection rate is 27% against the National standard, which is 95%".

"The municipality collection rate is poor, the communities are not paying, and even some of our major stakeholders and big businesses are not paying their bills, and this is affecting the municipal finances".

"Most of our communities are indigent, and in some cases, they don't come to register their status. So as a result, they are billed, and when it comes to paying, they will not pay because they don't afford it".

This finding is consistent with Oosthuizen and Thornhill's (2017:4) 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. In addition, the UN-Water (2019) argued that one of the main challenges in achieving equitable water governance is attributed to affordability challenges. The assertions of UN-Water (2019) back up the findings of the Amathole District Municipality, which found that the majority of users do not pay for water. 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 it. 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".

Furthermore, officials highlighted that the municipality receives other grants such as the Water Service Infrastructure Grant (WSIG), the Rural Household Infrastructure Grant, and the Municipal Infrastructure Grant (MIG), which are meant to address the infrastructural challenges faced by the municipality. However, these grants come with stringent requirements, and as a result, funds are underutilised. This affirmed Oosthuizen and Thornhill's (2017) findings, which observed that poor municipalities heavily rely on national transfers due to a significantly lower tax base than larger cities. 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 connection, and leakages. This is iterated in the following excerpts below:

"*It is difficult for the municipality to bill water and control the level of access because of shared communal standpipes. As a result, people end up using more than the minimum standards with the extra levels not being billed".*

"We lose a lot of revenue through leakages and illegal connections."

Insufficient revenue through poor collection rates and limited funding creates a financial imbalance within the Water Service Authorities, and this 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 (Oosthuizen and Thornhill, 2017:4), empirical evidence showed that they are not enough and the aims are far from being achieved. 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 to do so. Ensuring reliable, equitable, and sustainable water provision in those areas that lack access remains a challenge. Therefore, such a scenario affects decision-making and affects the level of access and infrastructural development within the district.

iii) Financial mismanagement

While the aforementioned issue focused mostly on municipal revenues, another theme that emerged under economic factors affecting water governance and social equity in Amathole District Municipality was the management of municipal finances. Participants indicated that the municipality is failing to utilize its funds effectively. This finding was further confirmed by the high rate of fruitless and irregular expenditure indicated by municipal finances. 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. Challenges in Amathole District Municipality financial management were further noted by Sutcliffe and Bannister (2020:9), 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. Furthermore, the Medium Term Strategic Framework (MTSF) (2014-2019) also noted 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 and Bannister, 2020:9). The finding was also confirmed with the focus group discussions with one participant commenting that:

"The fact that projects are not being completed in time clearly shows that the municipality is not managing their finances properly".

Some of the officials went on to show disappointment in the municipal financial management by revealing the following in the excerpts below:

"You will notice that the municipality is concentrating on unfunded mandates that do not help us achieve our primary goal, which is to provide water."

"The municipality is failing to collect revenue, and this has affected our ability to pay our creditors on time".

"*Some projects are not being completed on time because the municipalities would not have paid the service providers".*

The Parliamentary session held between CoGTA and Amathole District Municipality on the 31st of April 2021 further revealed that Amathole District Municipality financial capacity and management are weak. As a result, indications were made that the municipality should be put under administration (Section 139), and investigations should be carried out (Section 106). While this is the case in Amathole District Municipality, Greffrath *et al*., (2016) in Sutcliffe and Bannister (2020) articulated that ten municipalities have been placed under Section 139 intervention from the Provincial Executive in the Eastern Cape Province between 1994-2015. He further argued that national and provincial intervention has become "commonplace in the local sphere".

This finding is not a unique phenomenon in Amathole District Municipality but rather a reflection of the situation of most South African municipalities as highlighted by the Auditor General's findings. 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), 2020:24). The finding is also consistent with the back-to-basic approach that emphasises the need to address corruption, poor engagement with communities, poor financial management, and negative audit outcomes (Oosthuizen and Thornhill, 2017:7) in the local government.

1.27.4 Establishing a sustainable water governance framework for social equity in South African municipalities

To achieve the main research objective, the researcher interrogated what should be included in a water governance framework for social equity. Participants were asked to provide an honest opinion regarding what should be done to improve the water services provision in Amathole District Municipality. The following sub-themes emerged from the focus group discussions and interviews that were conducted.

a) Theme 1: Strengthening municipal governance and institutional capacity

The National Business Initiative (2019:5) highlighted that strengthening the institutional capacity of the South African Water Service Authorities is an integral part of poverty alleviation, reduction in unemployment, and addressing inequalities. The empirical findings confirmed these assertions, with institutional capacity emerging as a critical component to incorporate in the water governance and social equity framework. While participants differed in the areas that need to be improved, most concerns remained focused on the need to strengthen the institutional capacity of the municipality if social equity was to be achieved in Amathole District Municipality. Furthermore, two officials emphasised the importance of the municipality's structure supporting the fundamental mandate, which is to be a Water Service Authorities authority before becoming a district municipality, arguing that this would help solve the municipality's skills deficit.

One of the officials highlighted that:

"Before becoming a district municipality, municipal structuring should support the main and core mandate of being a Water Service Authority."

Another official commented that:

"Structural challenges should be addressed allowing technical skills to ensure water is available on the ground".

One official further commented on the need to integrate departments within the municipality to support the core mandate. However, further indications were made that poor integration results in delays that are non-responsive in addressing

community needs, resulting in more disparities. This is purported in the following excerpts below:

"There is need for supporting departments such as finance, human resources, and Supply Chain Management to fully align themselves with water and sanitation provision if service delivery is to be effective, efficient and responsive".

"Delegation of powers at certain levels allowing certain decisions to be done will allow service delivery to be effective and responsive, e.g. delegation by Chief Finance Officer as advised by the Department of Water and Sanitation through the incident protocol management".

Officials further recommended that the municipality abides by the legal framework to ensure transparency and accountability. Further emphasis was given to the need to strengthen control mechanisms in the municipality, with officials commenting that:

"There is a need to abide with the existing legal frameworks to ensure accountability and transparency".

Another official suggested that:

"*Control mechanisms should be strong in the municipality. For example, checking mileage and fuel consumption in the municipality vehicles to ensure that a change in financial management begins. Those small controls make a big difference, allowing transparency and accountability towards municipal resources".*

While another official suggested that:

"Proper implementation of Free Basic Service that is billing those who exceed 6000kl and updating the indigent register yearly through verification of documents and checking status".

One official further highlighted that the municipality's focus should be on the provision of standard infrastructure, while another official indicated that the focus should be on project completion as this determines their progress and improvement in addressing the backlogs and existing disparities in water service provision. Their views are highlighted in the following excerpts below:

"Water schemes should be up to standard and capable of meeting current and future generational and demand needs, as well as enabling their completion."

"Any intervention should prioritize project completion, such as ensuring that there is running water at the taps before moving on to other new plans. This will result in improved service delivery, as well as the ability for the municipality to track its backlog and progress."

b) Theme 2: Improving stakeholder involvement and community empowerment

Participants highlighted that the consultation and empowerment of communities should be improved as this will address some of the challenges that are being faced by the municipality. They stated that:

"There is a need to consult and empower communities to instil a sense of ownership and responsibility towards implemented projects. This should be coupled with proper education and support to avoid theft and vandalism".

"Improved communication and consultation with communities prior to project implementation, as well as evaluating the sustainability of projects before they are executed, are required to avoid community resistance and rejection during implementation." "One of the officials further highlighted that community consultation and empowerment would partially address the financial problems in the municipality. The suggestion was consistent with Kopano Ya Metsi's (2019) study, which recommended a need to identify and track the indigent households in a manner that does not place an undue burden on poor households (National Business Initiative, 2019:12). The official articulated that:

"There is need to encourage people to register if they fall under the indigent status. This will assist the municipalities in coming up with realistic budgeting while avoiding inflated budgets".

Officials further recommended the need for continuous campaigns, adopting a bottom-up approach in carrying out an educational campaign by sharing knowledge and expertise with the communities on the intensity of water inequities and their effects in widening the disparities in water service provision. Such an approach can

enable the communities to be viewed as partners in the municipality's water governance. This recommendation was also noted by National Business Initiative (2019:12), which emphasised the need to view residents as customers and not consumers if service delivery is improved. The recommendations of the participants are articulated in the following excerpts below:

"Constant campaigns are required, not just during elections." "Campaigns should be from within the communities not outsourced; this way, the bottom-up approach will enable community needs to be addressed".

"There is need to instil the importance of water and that water is a limited natural resource which is scarce and costly to provide through community education and campaigns so that demand can be reduced to meet supply".

"There is need for mind-set change starting from the communities to address the challenge of water and how their decisions affect other people leading them to poor access, e.g. through illegal connections to serve animals and irrigation".

"Rural communities should understand that while water is their basic right, the level of provision will always be different than in towns because of various reasons. Also, that the luxury in towns is paid-for water, and that luxury in rural areas is limited at the moment but maybe attainable in the future."

Participants further highlighted the need for improved integration with the local municipalities and support from the political structures to ensure successful project implementation by contending that:

"There is a need for collaboration and integration of local municipalities because water service provision is dependent on some of the services they provide, such as access roads. There is also a need for community cooperation to ensure that implemented programs are successful and sustainable, as well as political will from political structures to ensure proper project implementation effectively and efficiently through proper procedures".

c) Theme 3: Innovation and adoption of alternative strategies

The third theme centred on innovation and the adoption of alternative strategies in water governance. Interestingly, the study established that participants' recommendations on innovation and alternative strategies not only focused on addressing the water scarcity challenge but went on to further incorporate the adoption of alternative strategies in supplementing and raising revenues in order to improve infrastructure in municipal water governance.

Participants commented that the municipality should find ways to adapt and be resilient in water governance. In addressing the challenge of water scarcity, participants highlighted that:

"*Water harvesting and waste-water harvesting should be adopted to save water".*

"Municipalities should invest in more dams and practice water harvesting to save water".

To address the injustice resulting from the municipality's failure to provide adequate water services, one of the officials commented that:

"Water vendors and other service providers should be promoted".

"*Find more sustainable water sources to avoid purchasing water from Amatola".*

Both officials interviewed and focus group participants recommended that alternative strategies should be adopted to assist the municipality in raising its municipal revenue and address the persistent financial crisis being faced by the municipality.

One official commented that:

"There is a need for the municipality to tax the rich and subsidize the poor. This will allow the municipality to be financially stable and cater for those who are poor and do not afford water services at the same time".

One of the focus group participants recommended that:

"The municipality must adopt the pre-paid meters so that all water can be billed and address revenue collection challenges. This will also enable the municipality to bill all

those who exceed the minimum standard that is 25l per day per person prescribed by the FBS policy.

While another focus group participant suggested that:

"The municipality should use inside pipe dwelling so that they can be able to bill those who exceed the minimum standard".

This finding is consistent with the National Business Initiative (2019:13) recommendations, which reported that adopting an innovative and differentiated approach is crucial in most extreme cases to strengthen the Water Service Authorities. The need for more innovative ways to raise revenue in South African municipalities is of paramount importance as the increase in demand for services will always exert pressure on the Water Service Authorities (WSAs). Most importantly, while it is true that the national governments should intervene, Oosthuizen and Thornhill (2017:15) argue that municipalities should aim to do more with the little they have as the national government will not be expected to assist the municipalities indefinitely. He further noted that municipalities should rather re-evaluate their resources or identify alternative funding sources.

d) Theme 4: Policy framework

The sub-theme centred on addressing policy gaps within the South African water governance legal framework. Officials highlighted the need for policies to cater for the differences in contexts. For example, the difference between metros and rural municipalities, where the contestation is that a one-size-fits-all strategy will have an impact on water governance and development performance, particularly in impoverished municipalities and those with a very low revenue base. When commenting on this issue, one official noted that:

"*Implementation of national policies such as the Blue Drop and Green Drop should be applied differently and according to the category of the municipality. Differences in rural municipalities and metros should be noted as this all affects policy implementation and as such an umbrella approach would not be fair in determining municipal performance".*

Furthermore, officials highlighted that the Free Basic Service (FBS) has resulted in water wastage and increased demand as it has made people perceive water as a free commodity, as echoed in the following sentiment below:

"Free Basic Service should be significantly subsidised, but not free, to allow people to preserve water while also reducing demand and avoiding water misuse and waste without having to pay for it." Officials recommended that the water service function should become a local municipal function instead of the district. While others argued that this would ensure that water is provided at the lowest level and lead to improvements in communication and save time, other officials argued that this should be done as Amathole District Municipality cannot perform the function. They stated that:

"Water Utilities should take water service function, and the municipality should be left with the roles of operation and maintenance of the minor infrastructure".

"Amathole District Municipality should be removed as a Water Service Authority, and water should be provided by Local Municipalities which is the sphere closest to the ground. This will save time and result in improved communication".

However, this contradicts the National Business Initiative (2019) report, which highlighted that the role of the water Service Authorities in South Africa is unlikely to change fundamentally in the foreseeable future; hence it is important to ensure that Water Service Authorities are fully supported and understood (National Business Initiative, 2019:5).

1.28 CONCLUSION

The chapter has successfully presented the results/findings. Major themes and sub-themes were utilised in presenting the findings. While this Chapter has successfully answered the Research Sub-objectives, it has also provided the basis for developing a water governance framework for social equity in South African municipalities, as presented in the next Chapter. Conclusions and recommendations of the study, the significance of the findings in Public Administration and areas of future research are presented in the following Chapter

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

1.29 INTRODUCTION

The previous Chapter (Chapter 4) provided the key research findings which formed the basis of this study. Following the presentation of the findings, this Chapter provides a conclusion for the whole study by presenting a summary of all Chapters by highlighting the extent to which the study's primary purpose has been achieved. Furthermore, the Chapter draws significant conclusions emanating from an ultimate synthesis of the key research findings obtained from empirical data while proffering tangible and actionable recommendations. Lastly, the Chapter shows the findings' broader application and significance and suggest imperatives for future research emanating from this specific study.

1.30 SUMMARY OF CHAPTERS

At the onset, the researcher professed that despite the enacted social policies and water reforms in basic water service provision, South African municipalities still struggle to achieve social equity in their water governance. Consequently, persistent social inequities remain prevalent, and the gap between the "haves" and the "have nots" remains high. The researcher further declared that an analysis of basic water provision in South African municipalities revealed a practical limitation anchored on the absence of a water governance framework to enhance social equity at the local level, hence a gap which this study sought to address. In order to do so, the study engaged with theories and research that confirmed that prioritising social equity in water governance might be the key to achieving universal access, realise the right to water, and most importantly, achieving equitable water governance in basic water provision as captured in Chapter two. However, such analysis revealed a lack of a well-defined water governance framework for social equity to be utilised in water provision at the local level, specifically in Amathole District Municipality, Eastern Cape Province.

The researcher further engaged in the data collection process to address the identified problem through focus group discussions, participant observations, semi-

structured interviews, and secondary sources as captured in Chapter Three. Key research findings and interpretations presented from data analysis captured in Chapter Four indicate that the research questions and research sub-objectives have been fully answered and achieved, respectively. Most importantly, the key research findings presented in Chapter Four provided the basis for developing the proposed water governance framework for social equity presented in this Chapter, thereby answering the main research objective, which focused on the development of a water governance framework for social equity for South African municipalities. Lastly, the research supports the indications in the literature that prioritising the social equity pillar will ensure efficiency and sustainability in water governance. Resultantly, this enabled the drawing of significant research conclusions and recommendations, as presented below.

1.31 CONCLUSIONS AND RECOMMENDATIONS

The key research findings presented in Chapter Four provided the basis for these significant conclusions to be reached. Furthermore, the conclusions drawn paved the way for actionable and tangible recommendations to be proffered to ensure social equity in South African water governance at the local level.

1.31.1 Conceptual and theoretical constructs that form the building blocks for Water Governance Framework for Social Equity in Amathole District Municipality

One of the sub-objectives of the study focused on determining the fundamentals of human rights and social equity values (equality, justice, and fairness) in the context of water governance in South African municipalities. The research objective was fully answered in Chapter Two, revealing that all municipal processes and procedures are guided by the South African legal frameworks and the Constitution as the Supreme Law. The study further revealed that the South African water laws have fully incorporated the principles of the Human Rights-Based Approach (HRBA) and values of social equity. This recognition is reflected in Chapter 2 and Chapter 10 of the Constitution, which recognises the fundamentals of various human rights and the values of public administration, respectively. Other legal frameworks such as the Water Service Act, which were found under the value of social equity, and the Local

Government: Municipal Systems Act (Act No 32 of 2000), which aims to ensure inclusivity and participation of all stakeholders in municipal water governance, further demonstrates the recognition of the Human Rights-Based Approach (HRBA) and values of social equity as the underlying principles in water governance. As a result, municipal processes and procedures such as policy making, municipal financing, capacity developments, participation and planning, among others which forms the building blocks for a water governance framework, are guided by these legal frameworks which fully recognise the human right to water and social equity in basic water service provision.

The research objective was also answered through the empirical findings presented in Chapter four which revealed that while it is clear that the Human Rights-Based Approach (HRBA) comprising of the principles of equality, fairness, and justice (social justice theories) should be the basis for all municipal processes and procedures as set by the policy. However, the study revealed that there are still limitations in transparency, accountability, and participation, which forms the basis for the Human Rights-Based Approach and social justice theories in municipal water governance. As a result, the study concluded that water institutions run the risk of underutilisation of theoretical and conceptual constructs in achieving social equity, and this has resulted in persistent disparities in water governance in South African municipalities.

1.31.2 Recommendation

Therefore, following the conclusion above, the researcher recommends that water institutions in South African municipalities fully incorporate the Human Rights-Based Approach into their water governance frameworks. While this theory should form the basis of planning and policymaking, water institutions should ensure they incorporate the approach during project implementation and municipal processes and governance. Fully integrating the Human Rights-Based Approach (HRBA) will result in the realisation of the right to water and foster participation, transparency, and accountability, thereby establishing procedural justice in Amathole District Municipality's water governance.

1.31.3 Social inequities in basic water service provision in Amathole District municipality

This sub-objective was fully answered in Chapter Four, and it sought to identify social inequities in basic water provision in Amathole District Municipality's communities. Therefore, the study revealed that there is a significant population still lacking access to water services in Amathole District Municipality. Furthermore, the study also highlighted better and improved water provision in Amathole District Municipality's urban areas than rural areas, which also applies to the level of consistency in service provision. The level of participation and stakeholder engagement was limited, resulting in compromised transparency and accountability. Furthermore, the study showed that while some water interventions have had a positive impact on some communities, others had no impact because they did not change the state of water services. As a result, the study concluded that social inequities (access equity, process equity, outcome equity and procedural equity) remain prevalent in Amathole District Municipality. This is mainly attributed to geographical disparities and the rural-urban gap. Unfortunately, the study further concluded that those who are poor, vulnerable, and reside in rural areas are the most prone and endure the consequences of lack of access to water services and the persistent inequities. This implies that while Rawls' (1971) works and the Human Rights-Based Approach forms the basis to ensure universal access and eradicating inequities, the theories are under-utilised, resulting in persistent inequities with the above-mentioned groups bearing the detrimental consequences of lack of access to water services.

1.31.4 Recommendation

The study recommends that municipalities should not only focus on addressing access equity but also other forms of social inequities present, such as procedural equity, quality equity, and outcomes equity. Such consideration is of paramount importance as it directly or indirectly affects attaining equitable service distribution. In essence, addressing access equity without addressing the disparities in procedures, quality and outcomes is a self-defeating process on its own, and it fuels disparities in water governance. For instance, the perception of communities

regarding the fairness of procedures (procedural equity) highly determines the success and failure of implemented programs. Communities are likely to welcome and protect their resources if they feel that the distribution processes have been fair and just.

Regarding outcomes equity, disparities in water governance can only be addressed if implemented programmes and projects are changing the lives of the poor and vulnerable targeted groups. Therefore, the study recommends periodic evaluations to assess the impacts of implemented programmes, and failure to do so presents multiple challenges in achieving social equity, which will remain a myth.

The study further recommends that the municipality ensure quality equity by guaranteeing consistency in service provision. Finally, and most importantly, communities must recognise the spatial inequities that exist and work to close the rural-urban divide. While it is true that, South African municipalities are far from achieving an equal level of service between the rural and urban areas, the study contends that ensuring a level of consistency in services provided, making sure that those implemented programmes result in the betterment of those who do not have access and ensuring that processes and procedures are fair are some of the initial steps of eliminating social inequities in basic water provision and addressing the geographical disparities.

1.31.5 Factors affecting water governance and social equity and their impacts on basic water provision in Amathole District Municipality

The study's objective was to identify factors that impact Amathole District Municipality's water governance and social equity and how they affect social inequities in basic water service provision. This objective was fully achieved in Chapter Four which revealed that economic factors such as infrastructural challenges, financial mismanagement, and insufficient funding; environmental factors such as water scarcity and the technical nature of rural areas; institutional capacity and governance factors such as political interference, structural and skills deficit, and lack of policy implementation; socio-economic factors such as illegal connections and lack of community understanding on the importance of water and

water inequities are some of the aspects affecting water governance and social equity in basic water service provision.

The study also revealed that these factors had 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, especially during this 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 lack of capacity to find alternative measures to access safe, sufficient, and reliable water services.

While these factors appear to be independent, the study concluded that the issues identified above are highly intertwined, and failure in one area implies a failure in water governance, as presented in Figure 5.1 below. For instance, addressing infrastructural challenges implies huge financial investments and attracting the right skills depends on how favourable the remuneration is, especially in the context of rural municipalities such as Amathole District Municipality. 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 reached aligns with Rawls (1971) works which indicate that there is 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 factors identified reflect on the need for various sectors such as the civil society, public and private sector and other interest groups to work together through an integrated approach in addressing water challenges as recommended below.

1.31.6 Recommendations

Following the conclusions above, it can be deduced that factors affecting water governance are dependent on each other. While the study recommends an

integrated approach in addressing these factors (see Figure 5.1 below), the following strategies can be adopted to mitigate the impacts in water governance.

a) Economic factors:

- Boost municipal revenue through improved billing and customer payment options.
- Identify and track indigent households in a manner that does not put pressure on poor households.
- Install household metering to enable the municipality to bill those who exceed the minimum standard of water prescribed by the legislation.
- Implement price differentiation strategies, i.e. taxing the rich and subsidising the poor.
- Adopt alternative strategies to increase municipal revenue through donor funding, Public-Private Partnerships (PPPs), and Non-Governmental Organisations (NGOs) support.
- Practise sound financial management practices to avoid wasteful, fruitless, and irregular expenditure.
- Implementing consequence management to promote accountability and establish procedural justice

b) Environmental factors:

- Engaging in water conservation practises such as water harvesting and waste-water harvesting
- Invest in community education and awareness campaigns to save water, protect infrastructure and water resources. Community education may include educating the communities on how they can reduce demand through using clean water for drinking and cooking and water from unsafe sources such as rivers for laundry and sanitation services, should be done. Such measures will assist in regulating demand during droughts.

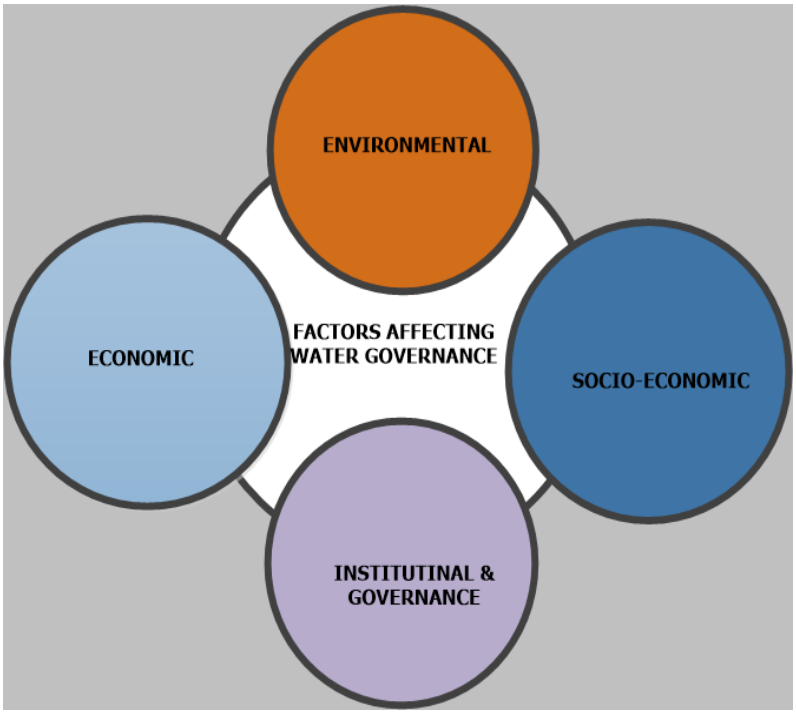


Figure 0.1: Integrated approach to addressing factors affecting water governance

Source: The Researcher (2021)

c) Socio-economic factors:

- Community education and awareness campaigns should be from within the communities as they understand each other.

- Deepen community involvement to instil a sense of ownership and empowerment, for instance, through collaborations and partnerships with the communities. The inclusion of communities in Amathole District Municipality's water governance will foster procedural justice, which implies transparency and openness.

d) Institutional capacity and governance factors:

- Training of the political structures to be fully aware of the urgency needed in addressing the existing disparities. Such training should remind the structures of the oath they took in representing the public and ensuring that their needs are served. As a result, this will foster political will and dedication to serving those who lack access to water services.

1.31.7 Establishing a sustainable water governance framework for social equity in South African municipalities

This objective sought to establish a sustainable water governance framework for social equity in South African municipalities. Therefore, the study concluded that achieving social equity in water governance goes beyond infrastructural and technical solutions. Instead, it requires coordination and cooperation from various stakeholders such as the communities, Non-Governmental Organisations (NGOs)s, the public, and the private sector. Such conclusion aligns with the Human Rights-Based Approach and Rawls (1971) work which encourages participation and involvement to address inequality, achieve equality of processes and equitable outcomes in water governance. The study also concluded that through these stakeholders, innovation is built, and alternative strategies are adopted. Most importantly, the communities that implement these programs are accepted, and the resources are protected from acts of vandalism and theft. Furthermore, the study concluded that for this to be feasible, Water Service Authorities (WSAs) as the key players responsible for ensuring equitable water service provision must be strengthened in terms of both financial and institutional capacity in order for them to be able to fulfil their Constitutional mandate of the right to water in a fair and just manner.

1.31.8 Recommendation

Following the conclusions made above, the study proposed a water governance framework for social equity, as presented in Figure 5.2 below. Therefore, the study recommends that Amathole District Municipality should adopt and implement the proposed framework to assess its effectiveness in ensuring social equity in water governance. Furthermore, the study recommends that the municipality adopts the systems thinking approach during the implementation of the framework to ensure continuous feedback from the community and other stakeholders. Such an approach will ensure continuous improvement to effectively address the disparities in water governance in South African municipalities.

1.32 PROPOSED FRAMEWORK FOR WATER GOVERNANCE AND SOCIAL EQUITY

The study's main research objective was to develop a water governance framework for social equity for South African municipalities, and this is fully answered in this section. The section presents the proposed framework intended to assist and guide policymakers in ensuring social equity in water governance at the local level. The developed framework is a hybrid of the existing water governance frameworks such as the OECD (2015a) Principles on Water Governance, the Water Governance Reform Framework (2019), and the Integrated Water Resource Management (IWRM), among others, discussed as captured in Chapter Two. The framework was also shaped and heavily influenced by the empirical results and findings captured in Chapter Four and the conclusions drawn in this Chapter. As a result, the framework is unique as it is contextualised for Amathole District Municipality and seeks to address the realities faced by the municipality and other South African municipalities with the same context.

Furthermore, the researcher argued that procedural justice is critical in ensuring social equity, and as such, it was of utmost importance that the framework is not only equitable but also be perceived as equitable by diverse stakeholders in water governance. Hence the presentation and communication of the framework aimed to do justice to its scientific and ethical foundations. Furthermore, the researcher ensured that the framework presented is easily understood by a diverse audience whose concerns in the framework should address, be reliably translated into operational terms, reflect widely accepted values and procedural principles, and most importantly, that the framework does not perpetuate discrimination and inequities in water governance. The framework comprises seven key areas:

(1) Foundational values and procedural principles; (2) Mind-set Change; (3) Clearly defined goal and purpose;(4) Understanding inequities in water governance;(5) Stakeholder involvement with clearly defined roles, rights and responsibilities deeply rooted in specific procedural justice elements and dedicated to achieving universal access;(6) Institutional framework; (7) Capacity investment dedicated to addressing

water inequities in water provision and (8) Continuous feedback, Coordination and integration.

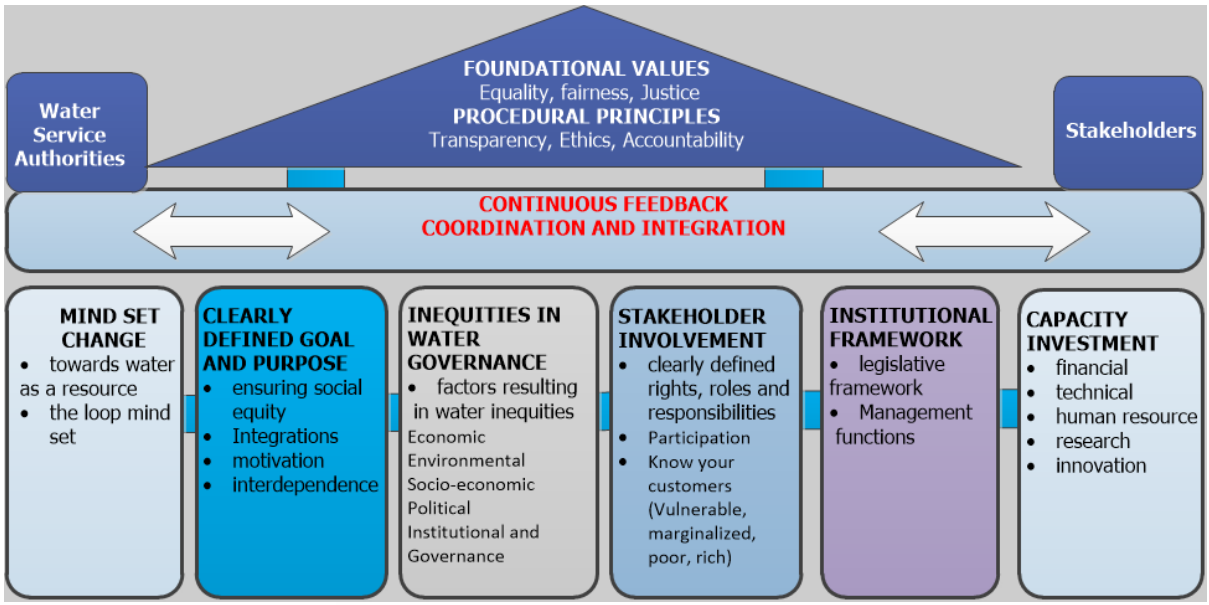


Figure 0.2: Water Governance Framework for Social Equity (WGFSE)

Source: The Researcher (2021)

1. Foundational values and procedural principles

The underlying conviction is that achieving social equity in water governance is the initial step in achieving effective water governance. Needless to say, addressing the trade-offs among the three pillars of sustainability, efficiency, and equity in water governance without negating other pillars. As such, the framework is strongly rooted under social equity values of fairness, equality and justice and procedural principles of transparency, accountability, and ethics. These considerations are consistent with the Human Right 2 Water (2021:53) observations that such principles are essential characteristics of a high-quality process. It further argued that these principles ensure that the hard-to-reach groups are involved, cultural preferences in respect to water and sanitation are considered, and such a process requires accountability and transparency through full stakeholder involvement (Human Right 2 Water, 2021).

The framework recognises the persistent disparities in water governance. As a result, the researcher invoked the *value of fairness* which requires the engagement

and participation of various stakeholders, specifically the poor and those who have been disadvantaged in taking part in water governance through processes such as policy formulation and project implementation. Procedural fairness is critically important for legitimacy and public acceptance of implemented programs, projects, and policies, especially those that favour the poor and vulnerable. Therefore, establishing fairness in water governance requires the framework to place *equality* as a foundational value. In essence, equality provides for equal opportunities for all to participate without discrimination due to race, ethnicity, gender, income status, or geographical location. This was also noted by the Human Right 2 Water (2021:55), which argued that during project implementation, inequalities could be aggravated or reproduced hence the need to ensure that all people are able to participate on an equal footing by making sure that there is no discrimination (Human Right 2 Water, 2021).

Furthermore, equality implies that everyone is treated as having equal dignity, worth and value. While this is the case, the framework recognises that the value of equality alone can fuel disparities in water governance, and as such, the framework calls for *differentiated equality* to be applied (egalitarian view). This involves allowing inequality to exist if those that are worse off become better off. As such, this provides an opportunity for the pro-poor measures to be established while ensuring that these disadvantaged groups retain equal power in decision making. Most importantly, the study acknowledges that *justic*e should be applied to mitigate inequities in water governance. This is premised on the notion that justice (egalitarian view) seeks equitability of opportunity and ensures that the least advantaged and the vulnerable are recognised in water service provision (Zeitoun *et al.*, 2014:181). As a result, justice addresses power imbalances, discrimination, segregation, entrenched privilege, vulnerability, and marginalisation in water governance (Haglund, 2014:80). For instance, framing water as a human right redefines marginalised groups as 'rights holders' rather than recipients of public services (Haglund, 2014:81). As a result, this enhances their capacity to make claims and mandates the states as 'duty bearers' to respond (Rammelt *et al.*, 2014:122).

These foundational values should be supported by procedural principles such as *transparency* and *accountability,* and this fosters communication among the stakeholders involved in water governance. During the process, *ethical considerations and moral values* must be upheld. Furthermore, these principles and values should be fully embedded into the processes and procedures of the Water Service Authorities (WSAs) from policy formulation to evaluation and from project inception to completion. Lastly, they should guide all municipal processes and decision making to ensure equitable water governance.

2. Mind-set change

Any organisation transformation requires a mindset change towards the achievement of the main purpose or goal. Likewise, achieving social equity in water governance is no different. Rather, it is more critical and imperative that all stakeholders involved in water service provision practice self-reflection and a mindset change. In doing so, the study proposes the use of the Loop Mindset developed by Klein and Hughes (2019), which consists of twelve (12) principles which consist of autonomy and self-organisation, the purpose of orientation, self-responsibility, ego to self, distributed leadership, thinking win-win, transparency, and open communication, focus on teams, thinking in continuous iterations and tension-based work. With the complexity in water governance, the mindset constitutes the fundamental characteristics of future institutions that focus on achieving social equity. While the Loop mindset was developed in the context of a single organisation, the researcher believes that if applied by all stakeholders involved in water governance ranging from civil society, private and public entities as well as the staff employed, it will transform the water service institutions into more functional and dedicated entities focused towards ensuring universal access to water for all.

3. Clearly defined goal and purpose

The framework was developed under the assumption that the main purpose of the Water Service Authorities (WSAs) is to ensure equitable water governance to communities under their jurisdiction. This main goal aligns with South African legal

frameworks such as the Water Service Act, the Constitutional obligations of the human right to water and the Sustainable Development Goals (Goal No 6 of Universal access to water). These communities incorporate all groups that use water services, particularly those who have been disadvantaged and lack access to water. A clear understanding of the purpose and goal of water institutions positively impacts the staff and employees to pave the way for service delivery. A clearly defined goal and purpose will motivate employees and communities and enhance integrations and teamwork within internal and outside departments involved in municipal water governance, an element currently lacking in municipalities and Water Service Authorities, as shown by the findings presented. Having each department understand the organisation's goal and its impact on the final service delivery is vital in achieving social equity. Furthermore, stakeholders must understand that the vulnerable and poor depend on their efficiency and effectiveness at work and dedication to achieve the organisational goal.

4. Understanding inequities in water governance

Addressing disparities in water governance not only requires the capacity and technical solutions. Rather, it calls for a holistic understanding of the social inequities and disparities in each context and set up. The need to fully understand the "haves" and the "have nots" mantra enables the correct strategies to be adopted and their success in addressing the community needs and persistent disparities. Most importantly, while reactive measures are necessary to address the persistent inequities in water provision, understanding inequities in water governance allows proactive measures to address inter-generational inequities for the present and future generations to come. Additionally, factors that have contributed to these disparities need to be fully understood so that strategies that fully address the root causes may be devised and implemented. Furthermore, the framework calls for understanding water inequities in a broad context that goes beyond quantification and quality. Alternatively, the impact on the standard of living and poverty should be fully understood as access to water has implications on the fulfilment of other rights.

5. Stakeholder involvement with clearly defined roles, rights and responsibilities deeply rooted in specific procedural justice elements and dedicated to achieve universal access

The times have shifted in which the burden to address water governance challenges and other public services provided falls on the public sector alone. This notion was further expounded by the adoption of participation as a Means of Implementation (MOI) to achieve the Sustainable Development Goals (SDGs) of 2030. Participation further emphasises the need for stakeholder involvement to ensure inclusivity and representativeness. However, this framework further elaborates and extenuates the need for the Water Service Authorities (WSAs) to be clear of who their stakeholders are and their roles and rights in water governance. The complexity and differences in beliefs and values in the stakeholders involved need to be understood by Water Service Authorities (WSAs). In defining the stakeholders, municipalities need to consider the main goal and purpose of addressing the disparities in water governance. Each stakeholder involved should be determined to perform their duty diligently and to the fullest if social equity is achieved. National and Provincial governments should fully support the Water Service Authorities (WSAs) as stipulated by the Constitution and on time through capacity investment and interventions as prescribed by the legislation. The Water Service Authorities (WSAs) should guarantee that the business sector is involved, and the objective and goal should be communicated to them clearly so that they can support municipalities in carrying out their responsibilities to ensure equitable service delivery. Lastly, Water Service Authorities (WSAs), with the information collected from understanding inequities, should be able to make distinctions on their customers who they are serving, who are the "haves", and who are the "have nots". This will enable the application of differentiated strategies to meet the needs of the communities while ensuring sustainability and efficiency. Reciprocally, the communities themselves need to be dedicated to performing their roles and responsibilities if social equity is to be achieved. As clarified in the misconception on the Human Rights-Based Approach (HRBA), water should be accessed, but that does not mean it should be for free. Communities should pay their taxes (Subsidised) and fulfil their role of protecting

their water from contamination, avoiding vandalism, and preserving their infrastructure. Dedicated communities and stakeholders need to fully understand the implications of their actions on the level of access by the next person. This key area will result in effective participation, integration, support, and successful programmes to address water inequities.

6. Institutional framework

An institutional framework will ensure that the municipality is guided by and abides by a policy framework that promotes social equity. Management functions such as planning, budgeting, and monitoring, among others, must be guided by a regulatory framework that aims to promote social equity in water governance. Furthermore, a sound institutional framework will warrant implementing public administration principles (Maramura, 2018:204), ensuring the realisation of the right to water and social equity in water governance.

7. Capacity investment dedicated to address water inequities in water provision management functions dedicated to addressing water inequities

Achieving Social equity in water governance requires huge investment in the Water Service Authorities (WSAs) capacity if the goal is to be achieved. Among the most crucial capacity constraints are funding, which determines the municipality's financial capacity; technical capacity, which is especially important in municipalities like Amathole District Municipality, which serves most of its rural areas; and human resource capacity, which refers to the distribution of the right skills at the right levels. Stakeholders involved in water governance, particularly the national and provincial governments, should be dedicated to investing in the areas that have been disadvantaged and ensure that these areas and populations are served. Appropriate measures should be put in place to ensure that Water Service Authorities (WSAs) can utilise the conditional funding provided for them by the government, especially those rural municipalities that are struggling to utilise their capital expenditure. More so, communities, the private sector and Non-Governmental Organisations (NGOs) should intervene in capacity investment as the burden of investing in strong institutions have moved from being the sole burden of the

government alone, but rather it has extended to all stakeholders involved in water governance. This recommendation was also supported by Furlong (2012:2721), who emphasised the need for municipalities to have capacity if institutional (regulatory) and organisational reforms are to fully realise their intended results and to fulfil the gamut of their responsibilities for water supply to enjoy long term economic and environmental sustainability in water supply (Furlong, 2012:2721).

8. Continuous feedback, coordination, and integration

The framework calls for continuous feedback, coordination, and integration among the Water Service Authorities (WSAs) as the public trustees and institutions responsible for water service provision and other stakeholders involved in water governance. Continuous feedback is critical in ensuring that Water Service Authorities (WSAs) and the stakeholders are up to date to ensure outcomes equity. Furthermore, this allows institutions and communities to be proactive and responsive when tackling inequities related to climate change, such as drought. Such strategies will ensure integration between the stakeholders and coordination from other supporting departments if social equity is achieved. Most importantly, this key area provides for clearer policy guidance and decision making among the stakeholders. It also enables those working towards the achievement of the Sustainable Development Goals (SDGs) to move away from siloed thinking and pave the way for the shift in treating the Sustainable Development Goals as a list to a more coherent and systematic structure that displays the influences of the goals on each other (Hall *et al.*, 2018:30).

1.33 DISCUSSION OF THE THEORETICAL AND METHODOLOGICAL CONSIDERATIONS, LITERATURE REVIEWS AND THE STUDY FINDINGS

The study findings above were heavily influenced by the methodological framework adopted for this study. The approaches taken such as adopting the constructivism approach and qualitative research enabled a deeper understanding of the issues raised regarding water inequities. Factors identified as major concerns resulting in high levels of disparities were a result of the in-depth conversations undertaken during the semi-structured interviews, focus group discussions and observations that

were done during the study. The worldview and research methods adopted played a crucial role in reaching the conclusion that for South Africa and other countries across the world to achieve the sustainable agenda and universal access to water demands strong attention to be paid to the social aspect of water. Such strong allegations confirm Zwarteveen *et al.,* (2017:2) observations that it is crucial to understand the social aspect in water governance and the widespread recognition by positivists who dominate the water policy that water is not only influenced by natural factors but also social aspects.

The study adopted the social justice theory and the Human Rights-Based Approach as the major theoretical considerations underpinning the study. In relation to the study findings, the researcher denoted that Water Service Authorities as service providers, stakeholders as interested parties and the government and civil society at large understand that participation, accountability, equity, fairness and justice are among the core foundations to achieve universal access to water, particularly to those groups who have been marginalised and disadvantaged. This was reflected by the presence of mechanisms and practices such as the participatory approaches and stakeholders' engagement to ensure justice and fairness in water provision. Whilst some of these practices are not done effectively and successfully in Amathole District Municipality, their presence such as the equal right to vote (equal opportunities) and subsidization of rural areas and the adoption of Free Basic Water Policy indicates that the stakeholders involved in water governance are making efforts to ensure that everyone has a fair share in water provision as noted by Rawl's 1971 difference principle and the Human Rights-Based Approach.

Lastly, but not least, the study findings confirm some of the previous works such as the Human Rights 2 Water (2021) and United Nations (2019) which observed that despite the efforts being made by both developing and developing countries, significant groups particularly those who have been disadvantaged still lack access to water services and that ensuring social equity in water governance might be the key to achieve the sustainable agenda (Vision 2030) Camkin and Neto (2016). On the other hand, the study findings such as that South Africa's water policy is strong but

poorly implemented differs from Adom and Simatele's (2021:517) observations which concluded that the country's policy is fragmented and need to be reconsidered. Despite these differences, the study finding along with the literature confirms the notion that poorly designed, inadequately implemented policies coupled with inefficient and improper use of financial resources fuel the persistence of inequities in the access to water services (United Nations, 2019). As such, the recommended framework if adopted and fully implemented will bridge the gap between policy and reality.

1.34 SIGNIFICANCE OF FINDINGS IN PUBLIC ADMINISTRATION

Public Administration seeks to ensure that community needs are served efficiently, effectively, and equitably as prescribed by Chapter 10 of the South African Constitution. In terms of the international conventions, Public Administration is aimed at ensuring that international obligations such as the realisation of the human right to water are upheld. Therefore, in recommending the adoption of this Water Governance framework for Social Equity, the researcher is fully confident that full consideration of each key area would assist in the realisation of social equity in South African municipalities. Furthermore, embracing this framework, implementing, and monitoring it with commitment and cooperation from all stakeholders will result in equitable, efficiency and sustainability in water governance and resilient water institutions. Hence, this proposed framework should be perceived as a tool to assist Water Service Authorities in achieving their Constitutional mandate of realising the right to water services and achieving universal access to water (SDG No 6).

Furthermore, the key research findings in this study have contributed to the body of knowledge for Public Administration in understanding the implications of social equity as a pillar of water governance. Recommendations proffered provided a way in which the utilisation of proper monitoring and commitment will assist in achieving the National Development Plan (NDP) Vision 2030, which aims to address inequalities and poverty in South Africa. In addition, when public administration is viewed as an activity, the recommendations offered when properly implemented will lead to improved water service provision, especially to those areas that have been disadvantaged and lack access. As a result, the functional activities of public

administration would have been fulfilled. In terms of the political perspective of public administration, the framework proposed will assist in policymaking by the political structures and assist in decision making and implementation by the administrative structures. In summary, the study paved the way for achieving the Constitutional objectives for local government.

1.35 AREAS OF FUTURE RESEARCH

Considering the recommendations proffered, the researcher argues that there is a need for the proposed framework to be tested in the real world and evaluate its effectiveness and impact in addressing social inequities in water governance. Furthermore, the study found that social inequities in water provision should be considered not only in terms of water quantity and quality but also in terms of the costs incurred as a result of a lack of access to water services, such as time spent waiting in queues and long distances travelled to fetch water. Therefore, this study has laid out a platform for future research to be carried out in South African municipalities regarding more detailed costs resulting from a lack of access to water services.

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ADDENDA

ADDENDUM A: ETHICAL CLEARANCE CERTIFICATE

University of Fort Hare
Together in Excellence

ETHICS CLEARANCE
REC-270710-028-RA Level 01

Project Number:	SIB051SHUT01
Project title:	**Water governance and social equity in South Africa: A case Study of Amathole District Municipality.**
Qualification:	Masters in Public Administration (Full Dissertation)
Student name:	Clarity Hutete
Registration number:	201911952
Supervisor:	Dr M.M Sibanda
Department:	Public Administration
Co-supervisor:	N/A

On behalf of the University of Fort Hare's Research Ethics Committee (UREC) I hereby grant ethics approval for SIB051SHUT01. This approval is valid for 12 months from the date of approval. Renewal of approval must be applied for BEFORE termination of this approval period. Renewal is subject to receipt of a satisfactory progress report. The approval covers the undertakings contained in the above-mentioned project and research instrument(s). The research may commence as from the 03/11/20, using the reference number indicated above.

Note that should any other instruments be required or amendments become necessary, these require separate authorisation.

Please note that UREC must be informed immediately of

- Any material changes in the conditions or undertakings mentioned in the document;
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research.

The student must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

UREC retains the right to

- Withdraw or amend this approval if
    - Any unethical principal or practices are revealed or suspected;
    - Relevant information has been withheld or misrepresented;
    - Regulatory changes of whatsoever nature so require;
    - The conditions contained in the Certificate have not been adhered to.

- Request access to any information or data at any time during the course or after completion of the project.

Your compliance with Department of Health 2015 guidelines and any other applicable regulatory instruments and with UREC ethics requirements as contained in UREC policies and standard operating procedures is implied.

UREC wishes you well in your research.

Yours sincerely

Professor Renuka Vithal
Chairperson: University Research Ethics Committee
22 February 2021

ADDENDUM B: REQUISITION LETTER TO UNDERTAKE STUDY

University of Fort Hare

DEPARTMENT OF PUBLIC ADMINISTRATION
FACULTY OF MANAGEMENT AND COMMERCE

Bhisho Campus:
Independence Avenue, 5605 Parliament Hill, Bhisho, South Africa
Tel: +27 (0) 40 608 3403 • Fax: +27 (0) 40 608 3408

University of Fort Hare
Together in Excellence

28 February, 2021

The Municipal Manager

RE: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY – HUTETE C. 201911952

This serves to confirm that, **Hutete, Clarity (201911952)**, is a registered Master of Administration [Public Administration] [By Research], student at the University of Fort Hare. In fulfilment of the requirements for this Master's degree, she is expected to carry out a research study, which will culminate in the submission of and subsequent examination of the resulting dissertation.

The title of her Masters Dissertation is: **"Water Governance and Social Equity in South Africa: A Case Study of Amathole District Municipality"**, and is being undertaken under my Supervision (Dr MM Sibanda).

The main objective of this study is to develop a water governance framework for social equity in South African municipalities. The sub-objectives are to: i) determine the conceptual and theoretical constructs that form the building blocks for a water governance framework and how water governance dynamics influence social equity in South African municipalities; ii) identify social inequities in basic water service provision in Amathole District Municipality; iii) identify factors that impact on water governance and social equity and their influence on social inequities and basic water provision in Amathole District Municipality; and iv) establish a sustainable water governance framework for social equity in South African municipalities.

The research study will collect data using in-depth semi-structured interviews and focus group discussions with key selected participants/respondents, chosen through purposeful sampling. It will also make use selected official documents that may be relevant to the study and non-participant observation. The study will be invaluable to the functions of municipalities, in that it will assist Water Service Authorities (WSA) in addressing and prioritising the water service requirements of the needy and underprivileged members of the community. At the national as well as local levels, the study will provide both elected and appointed public officials, with a deeper consciousness and agency on water service provision, governance, policy and decision-making issues, enabling them to achieve the country's National Development Plan (Vision 2030), outputs and outcomes, as well as the realisation of the Sustainable Developmental Goal of universal access to water.

University of Fort Hare

DEPARTMENT OF PUBLIC ADMINISTRATION
FACULTY OF MANAGEMENT AND COMMERCE

Bhisho Campus:
Independence Avenue, 5605 Parliament Hill, Bhisho, South Africa
Tel: +27 (0) 40 608 3403 • Fax: +27 (0) 40 608 3408

Approval for this study has been granted by the University Research Ethics Committee (UREC), under ethical clearance reference number: SIB051SHUT01. The student has been advised to comply with health guidelines and any other applicable regulatory Covid 19 instruments/protocols and with UREC ethics requirements as contained in UREC policies and standard operating procedures. Ethical research principles will thus, be strictly adhered to, throughout the research process. The information/data obtained will only be used for purposes of this study. Anonymity and confidentiality of research participants' information/data will be strictly observed throughout the research process. A copy of the final research report, will be made available to the municipality on request, after it has been approved by the University.

I thus, kindly request your office to grant permission to this student, to enable her to collect the necessary data/information from relevant participants in your municipality. Your kind assistance in this regard will be highly appreciated and I would like to thank you for taking the time to assist this student, and for allowing your officials, staff and other relevant municipal stakeholders to be part of this research study. I am sure the study will not only be beneficial to her, but also to your municipality.

Yours sincerely,

Dr MM Sibanda

e. mmsibanda@ufh.ac.za or mmudzamba@ufh.ac.za
tel (w): 040 602 3462

ADDENDUM C: REQUISITION LETTER TO UNDERTAKE STUDY

No 1 Molefe
University of Fort Hare
King William's Road
Alice, 5700

11 February 2021

The Municipal Manager
Amathole District Municipality
3-33 Phillip Frame Road, Chiselhurst,
Cambridge, East London

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT AMATHOLE DISTRICT MUNICIPALITY

Dear Sir/ Madam

My name is Clarity Hutete, a Master of Administration in Public Administration student at the University of Forth Hare. I kindly request permission to conduct a research study within Amathole District Municipality. My research focuses on water governance and social equity issues in South African Municipalities with a particular interest in the Eastern Cape. My dissertation is entitled *Water Governance and Social Equity in South Africa: A case study of Amathole District Municipality* under the supervision of Dr M. M. Sibanda with the Department of Public Administration, at the University of Fort Hare.

Upon your approval, face-to-face or telephonic interviews of not more than 30 minutes each will be carried out with the following personnel at Amathole District Municipality level; municipal manager, a participant from the Local Economic Development department, a participant from the engineering department, a participant from the finance department, one ward councillor and one ward committee member. Furthermore, interviews will also be carried out at the Local Municipal level focusing on two Local Municipalities i.e. Mbashe Local Municipality and Raymond Mhlaba Local Municipality. At the Local Municipal level, interviews will include the following personnel for each Municipality; a municipal manager, a ward councillor, a ward committee member and a representative from Amathole District Municipality.

Together with individual interviews, three focus group discussions of seven participants (each) will be carried out at the agreed places and times with community-based organisations members from Mbashe Local Municipality and Raymond Mhlaba Local Municipality and water forums from Amathole District Municipality. These focus group discussions will run for an hour per each session at most. Lastly, I intend to have one week tour at Amathole District Municipality as a non-participant observer.

Other stakeholders that will be involved in the study include the Department of Water and Sanitation and Amatola Water Board and participants from departments at the University of Fort Hare namely Public Administration, Science and Agriculture and Developmental studies. Participants' confidentiality and anonymity will always be upheld during the research process as well as during the publication of the dissertation. I have provided you with a copy of my dissertation proposal, the interview guide and the consent forms to be used in the research process as well as the letter which I received from the University of Fort Hare Research Ethics Committee.

Upon competition of the study, a full copy of the research report will be provided to you on request.

Your support for this study will be greatly appreciated.

Yours Sincerely,

Clarity Hutete
E: clarityutete@gmail.com / C: +27 (0) 67 772 4897

ADDENDUM D: APPROVAL LETTER TO CONDUCT RESEARCH FROM ADM

MEMORANDUM OF UNDERSTANDING (MOU)

in respect of

ACADEMIC RESEARCH: MASTER OF ADMINISTRATION IN PUBLUC ADMINISTRATION

entered into between

CLARITY HUTETE

and

AMATHOLE DISTRICT MUNICIPALITY

(Hereinafter referred to as "**The Municipality**")

Represented herein by **Dr. T.T. Mnyimba**

in his/her capacity as Municipal Manager
who is duly authorised to enter into this Agreement

1. PURPOSE

To record the terms and conditions applicable to both parties.

2. INTERPRETATION

In this MOU, unless clearly inconsistent with or otherwise indicated by the context:

"The Municipality" means Amathole District Municipality;

"Researcher" means Ms Hutete Clarity

"Delegated authority" means an official appointed to act at an operational level on behalf of the Municipality, with regard to this MOU;

"Effective date" means the date on which both Parties have signed the MOU;

"Parties / Party" refers to the Municipality and Ms Vikelwa Judith Nomnga

"The MOU / this MOU" means this Memorandum of Understanding.

3. DURATION OF THIS AGREEMENT

This Agreement shall commence **FROM THE DATE THAT THIS MOU IS SIGNED BY MUNICIPAL MANAGER,** and shall terminate on **22 MARCH 2022**.

4. PRINCIPLES OF COOPERATION

The following obligations shall guide the implementation of this MOU:

4.1 **ADM** shall adhere to the specific scope of the research, as supplied by the researcher, and shall make available and supply relevant information, in line with his/her research.

4.2 **The researcher** shall hold ADM's information in the strictest of confidence, and not to make use thereof, other than for the performance of its obligations in terms of this Agreement.

4.3 Both parties will carry out their duties in terms of this Agreement in accordance with good faith.

5. INTELLECTUAL PROPERTY

5.1 All ADM information of any form, (including electronic) is the sole proprietor of ADM, and researcher shall not, during the currency of this Agreement, or thereafter, engage in any action whatsoever, that in any way may affect, or prejudice ADM's rights to their Intellectual property.

5.2 ADM acknowledges and agrees that any unauthorized use or exploitation of ADMs Intellectual property shall constitute a material breach of this Agreement.

6. INDEMNITY

6.1 ADM shall be indemnified against all loss, injury or damage, including legal costs, arising directly or indirectly from any act or omission on the part of ADM.

7. COMMUNICATION

17.1 All communication regarding the implementation of this MOU shall be done via ADM's Corporate Services Department, Office of the Director.

8. BREACH AND TERMINATION

If researcher has not complied with any of his/her obligations set out on this Agreement, then ADM shall be entitled to;

8.1 Cancel this Agreement

8.2 rely on any applicable law remedy for breach of this Agreement, including the right to claim damages from the researcher.

9. ENTRY INTO FORCE

This MOU shall enter into force upon signature by both Parties. (i.e. Researcher & ADM)

10. DOMICILIUM CITANDI ET EXECUTANDI

11.1 ADM chooses the following address as its domicilia citandi et executandi for all purposes of, and in connection with this MOU.

Amathole District Municipality
Waverly Office Complex;
3-33 Phillip Frame Rd;
Chiselhurst
East London - 5200

11.2 Clarity Hutete chooses the following address as her domicilia citandi et executandi for all purposes of, and in connection with this MOU.

No 1 Molefe House
University of Fort Hare
X1314 King William's Road
Alice -5700

DULY EXECUTED AND SIGNED AT EAST LONDON ON THIS..24..DAY OF..March.....2021.

FOR MUNICIPALITY – MUNICIPAL MANAGER – SIGNATURE.....

AS WITNESS:

ACTING DIRECTOR – ADM CORPORATE SERVICES DEPT. SIGNATURE .....

FOR RESEARCHER – MS. CLARITY HUTETE – SIGNATURE.....chutete.....

ADDENDUM E: INTERVIEW GUIDE

SEMI-STRUCTURED INTERVIEW GUIDE

1. THEORETICAL AND CONCEPTUAL CONSTRUCTS THAT FORM THE BUILDING BLOCKS FOR WATER GOVERNANCE FOR SOCIAL EQUITY FRAMEWORK AND THEIR INFLUENCE IN ACHIEVING UNIVERSAL ACCESS FOR ALL

- What municipal procedures or practises promote justice, fairness and equal access in the systems influencing water related decisions, water use and management in Amathole District municipality?
- Which criteria does the municipality use to measure fairness, justice and equality in its political, social and administrative systems that influence water related decisions in Amathole District Municipality?
- Which governance principles guide the processes and institutions involved in water service provision in the Amathole District Municipality?
- What challenges are being faced by the municipality in achieving equitable water service provision?

2. IDENTIFYING WATER SERVICES INEQUITIES IN ADM

- Which source of water is common in Amathole District Municipality?
- Are there other areas receiving better water services than others in the district? If yes, please identify the areas and give reasons.
- What form of participatory approach does the municipality use to incorporate other involved actors (public and private entities, civil society and academia) in its water related issues and to what extent is it effective in addressing the needs of those who lack access to water services?
- Are the poor/vulnerable, women, and low-income earners involved in the decision-making process in ADM? If yes, explain how you ensure their representation?
- What effort is being put by the municipality to ensure that rural areas have access to water services in Amathole District Municipality?
- Is the municipality meeting the acceptable standards of water service provision in the Amathole District Municipality?

3. FACTORS AFFECTING SOCIAL EQUITY AND WATER GOVERNANCE IN ADM

- How does the current policy, legislation, and regulations encourage or limit the achievement of equitable and universal access of water in the Amathole District Municipality?

FOCUS GROUP INTERVIEW GUIDE

1. THEORETICAL AND CONCEPTUAL CONSTRUCTS THAT FORM THE BUILDING BLOCKS FOR WATER GOVERNANCE FOR SOCIAL EQUITY FRAMEWORK AND THEIR INFLUENCE IN ACHIEVING UNIVERSAL ACCESS FOR ALL

- Is Amathole District municipality open, transparent and accountable in its decisions and processes in water service provision?
- What challenges are being faced by the municipality in ensuring that everyone has access to water services in the district?

2. IDENTIFYING WATER SERVICES INEQUITIES IN ADM

- Which source of water is commonly used by your community?
- How often do you get water from the municipality?
- How often does the municipality officials visit your communities to inspect the state of water infrastructure?
- How responsive is the municipality in addressing water-related complaints and faults?
- Are there other areas receiving better access to water services than others in the district? If yes, please identify the areas and give reasons.
- How often do you participate in water-related matters?
- What form of participatory approach does the municipality use in its water related issues and to what extent is it effective in addressing the needs of those who lack access to water services?
- What effort is being put by the municipality to ensure that rural areas have access to water services in Amathole District Municipality?
- Is the municipality meeting the acceptable standards of water service provision in the Amathole District Municipality?

3. FACTORS AFFECTING SOCIAL EQUITY AND WATER GOVERNANCE IN ADM

- What other factors do you think affect the achievement of fairness, justice and equal access to water services in Amathole District Municipality systems and processes?

4. DEVELOPING A FRAMEWORK FOR WATER GOVERNANCE AND SOCIAL EQUITY

- What forms of intervention and measures are being undertaken by the municipality to ensure that those who lack access in water services are reached?

- In what ways does the financial management in Amathole District municipality encourage equitable and universal access of water for all in the district?
- What forms of capacity building or awareness campaigns are being done by the municipality to raise awareness regarding the uneven distribution of water services in the district?
- What other factors do you think affect the achievement of fairness, justice and equal access to water services in Amathole District Municipality systems and processes?

4. DEVELOPING A FRAMEWORK FOR WATER GOVERNANCE AND SOCIAL EQUITY

- How strong is the municipality's administrative scale and water related knowledge in performing its duties as a Water Service Authority?
- What forms of intervention and measures are being undertaken by the municipality to promote fairness, justice and equal access in water service provision and to ensure that those who lack access are reached?
- What do you think should be done (and by whom), to ensure that the water related systems involved in Amathole District Municipality result in fair, just and equal access in water service provision?

ADDENDUM F: INFORMED CONSENT SHEET

University of Fort Hare
Together in Excellence

INDIVIDUAL INFORMATION SHEET AND INFORMED CONSENT FORM[1]

(AGES 18 YEARS AND ABOVE)

Please note:

This form is to be completed by the researcher(s) as well as by the interviewee before the commencement of the research. Copies of the signed form must be filed and kept on record

(To be adapted for individual circumstances/needs)

Title of Study: Water Governance and Social Equity: A case study of Amathole District Municipality

Dear participant,

My name is **Clarity Hutete** and I am currently studying a Master of Administration (Public Administration) Degree at the University of Fort Hare. I am conducting a study on, "**Water Governance and Social Equity: A case study of Amathole District Municipality"** as part of the requirement of the degree.

Purpose of the Study

The purpose of this study is to develop a water governance framework for social equity, a framework that will assist municipalities and those involved in water service provision at the local level in reducing the existing disparities and social inequities in water service provision in South African municipalities, specifically Amathole District Municipality. The proposed framework will be used to advise councils, municipal officials, planners, and policymakers on how they can identify existing gaps (inequities) and measures that they can implement to reduce these disparities. The framework will also ensure the representation and recognition

[1] Approved by UREC (13 November 2019)

of the vulnerable, the marginalized, and those who lack access to water services. Furthermore, it will ensure that the voices of the once disadvantaged are heard. Most importantly, the framework will ensure that the values of social equity such as fairness, justice, and equality are upheld in Amathole District Municipality water governance as well as other South African municipalities. These values will guide the institutions, actors, processes, and procedures involved in the allocation and distribution of water services as well as water-related decisions.

I would like your permission to conduct a brief (30minutes) interview with you about the water governance and social equity in basic water service provision in the Amathole District Municipality.

(**Study Procedure** (Explain all procedures using layperson's terms).

I will use an interview guide of structured questions in asking questions. Some of these questions may be of a personal and/or sensitive nature. I will be asking some questions that you may not have thought about before. We know that you cannot be certain about the answers to these questions, but we ask that you try to think about these questions. When it comes to answering questions there are no right and wrong answers.

Please understand that **your participation is voluntary** and you are not being forced to take part in this study. The choice of whether to participate or not is yours. However, we would appreciate it if you do share your thoughts with us. If you choose not to take part, you will not be affected in any way whatsoever. If you agree to participate, you may stop me at any time and tell me that you don't want to go on with the interview. If you do this there will also be no penalties and you will NOT be prejudiced in ANY way.

The information will remain confidential. This means that your name and address will not be linked in any way to the answers you give. We study and report on the answers given by all the people we interview and not on an individual basis. The research data will be anonymous – with all personal respondent information removed and will be archived at the University.

Risk-Benefit Ratio *(benefits hoped for from this study and the risks involved for the participant):*

At present, we do not see any risks in your participation. The risks associated with participation in this study are no greater than those encountered in daily life.

There are no immediate benefits to you from participating in this study. However, this study will help in developing a framework that will assist in reducing the existing disparities in water

service provision in the Amathole District Municipality. It is also our belief that this study will greatly assist the municipalities to achieve social equity in their water governance, enabling them to regain public trust and improve service delivery (water services). For communities, we hope that the study will lead to improved service delivery and customer satisfaction, it will also ensure those who lack access to water services (due to different reasons) are recognised and given a chance to enjoy their constitutional and human right to water services. The study will also assist South Africa in reaching its Vision 2030 and the Sustainable Developmental Goals (SDG No.6 of universal access to water for all).

Who to contact if you have been harmed or have any concerns

This research has been approved by the Inter-Faculties Research Ethics Committee (IFREC) as per the delegated authority of the University Research Ethics Committee (UREC). If you have any complaints about ethical aspects of the research or feel that you have been harmed in any way by participating in this study, please call the IFREC Administrator, [Prof Liezel Cilliers on LCilliers@ufh.ac.za]

Reporting and Complaints

If you have questions at any time about this study, or if you have concerns/questions you may contact the researcher/project leader whose contact information is provided on the first page. If you have questions regarding your rights as a research participant, or if problems arise which you do not feel you can discuss with the researcher/project leader, please contact the IFREC Chairperson, Prof. Munacinga Simatele on [MSimatele@ufh.ac.za] or the UREC Chairperson, Prof. Renuka Vithal on [RVithal@ufh.ac.za]

If you have concerns or questions about this study please feel free to contact the project coordinators: **Researcher/Project Leader:**

Name: …Hutete Clarity ……

Department: …Public Administration……

Address: …Department of Public Administration, University of Fort Hare, Independence Avenue, Bisho Campus, Bisho 5605

Phone: …+27677724897……

Email: ……**clarityutete@gmail.com**……

INFORMED CONSENT FORM

ADDENDUM G: LANGUAGE EDITING CERTIFICATE

WM English Language Editing Services

I, WAYNE MALINGA hereby confirm that I have proof read and edited the **Masters Research**

Titled

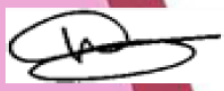
WATER GOVERNANCE AND SOCIAL EQUITY IN SOUTH AFRICA: A CASE STUDY OF AMATHOLE DISTRICT MUNICIPALITY

By

CLARITY HUTETE

The Windows 'Tracking' System was used to reflect my comments and suggested corrections are given for the author to action.

During the process of the proof reading and editing, the following changes were recommended: punctuation, grammatical and sentence construction and how to improve on coherence of the document. In addition, consistency in use of abbreviations, uniformity referencing style (in text and reference list) was given by the editor. Although greatest care was taken in editing this document, the final responsibility for the product rests with the author.



20/08/2021

Editor's signature **Date**

Dr. W. Malinga

PhD (Development Studies, UFH-SA)

M.A (Development Studies, MSU-Zim)

B.A (Hons) (History and Development Studies, MSU-Zim)

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ADDENDUM H: PLAGIARISM REPORT

FINAL DRAFT MASTERS

ORIGINALITY REPORT

16%	13%	8%	4%
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