



UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

THE EXPLORATION OF ACCOUNTABILITY FRAMEWORKS FOR SEWAGE WORKS MANAGEMENT AT THE CITY OF MBOMBELA LOCAL MUNICIPALITY

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A research report submitted to the Faculty of Commerce, Law and Management,
University of the Witwatersrand, Johannesburg, in partial fulfilment of the
requirements for the degree of Master of Management in Public Policy

Mbombela, 2024

DECLARATION

I Mamaropeng Marcus Selepe declare that this Dissertation is my own, unaided work. It is being submitted for the Degree of Master of Management in Public Policy at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.



(Signature of candidate)

28th day of February 2024 in Mbombela

DEDICATION

This Dissertation is dedicated to my late father Serupula Samuel Selepe 1929 – 2009 and my mother Kolobe Hendrica Selepe who have steadfastly encouraged us to achieve better results in life and greatly valued education.

ABSTRACT

This study used the City of Mbombela Local Municipality as a case study to investigate how accountability mechanisms are implemented for wastewater treatment works. Wastewater treatment works generally perform poorly and discharge poor quality effluent into our water resources causing pollution and possible health effects. The City of Mbombela Local Municipality own eight wastewater treatment works. The Green Drop progress report for 2023 showed that five of the wastewater treatment works which are managed by the municipality perform poorly compared to the three which are managed by the municipal water services provider, Silulumanzi.

The purpose of the study was to determine what accountability challenges are experienced by those assigned the function of managing wastewater treatment works at the City of Mbombela Local Municipality. The study adopted a qualitative research approach and collected data through semi-structured interviews. The results of this study show that the City of Mbombela Local Municipality does not have formal accountability mechanisms in place to hold those assigned the responsibility of managing wastewater treatment works accountable for the performance thereof. This study has revealed the absence of accountability as a possible contributor to the resultant poor performance of wastewater treatment at the City of Mbombela Local Municipality.

The findings of the study could inform practice and offer insights about practices in the wastewater management business. It is recommended that municipal managers include the performance of wastewater treatment works as a performance indicator in their annual performance plans as well as in performance agreements of officials responsible for the management of wastewater treatment works. This will enable municipal managers to have a handle on the performance and compliance of wastewater treatment works as these will be reported at the required frequency and subjected to appropriate scrutiny. It is further recommended that a follow up study be conducted to compare accountability mechanisms for wastewater treatment works managed by municipalities against those managed by independent water service providers.

ACKNOWLEDGEMENTS

I am sincerely grateful to my supervisor, Professor Mike Muller for his supervision, insight, responsiveness, and guidance in this journey. A big thank you to my wife Vanessa and children for the sacrifices they made on the quality of our family time and support through this whole journey. Your support was my greatest source of encouragement. Thank you to my colleagues Dr Bheki Maliba and Ms Caroline Tlowana who assisted with the formatting of the document. My deepest gratitude goes to my employer, the Inkomati-Usuthu Catchment Management Agency (IUCMA), for funding my studies and investing in my personal growth.

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ACRONYMS

APP	Annual Performance Plan
CEO	Chief Executive Officer
CoGTA	Department of Co-operative Governance and Traditional Affairs
DWAF	Department of Water Affairs and Forestry
DWS	Department of Water and Sanitation
<i>E. coli</i>	<i>Escherichia coli</i>
IDP	Integrated Development Plan
IUCMA	Inkomati-Usuthu Catchment Management Agency
MM	Municipal Manager
MuSSA	Municipal Strategic Self-Assessment
SDBIP	Service Delivery and Budget Implementation Plan
WWTWs	Wastewater Treatment Works
WSDP	Water Services Development Plan
WUL	Water Use License

1. CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1. Introduction and background to the study

The provision of water services is a basic service and a human right enshrined in the constitution of South Africa, where citizens have the right of access to sufficient food and water (Constitution of the Republic of South Africa, Act 108 of 1996, p11). The water services function is comprised of two components, namely, the potable water provision and wastewater treatment (Haigh, Fox and Davies-Coleman, 2010). Water services has been devolved to the local government sphere while the Department of Water and Sanitation (DWS) is a regulatory authority that sets norms and standards, but also ensures the compliance to norms and standards specific to water services by municipalities on the one hand (DWAF, 2004). On the other hand, the Department of Cooperative Government and Traditional Affairs (CoGTA) is responsible for ensuring the overall compliance and improvement in service delivery by municipalities (CoGTA 2000, p. 94).

Several pieces of legislation provide municipalities with the authority to implement water services function. The most important of these legislations is the Local Government: Municipal Systems Act, Act 32 of 2000, which gives municipalities “the right to do anything reasonably necessary for, or incidental to, the effective performance of its functions and the exercise of its powers” (Department of Cooperative Governance and Traditional Affairs [CoGTA], 2000, p. 22). This Act allows the municipality to adopt an Integrated Development Plan (IDP) and align its resources and capacity with the implementation of the plan as well as “establish a performance management system in line with the priorities, objectives, indicators and targets contained in its IDP”. The municipality is further required in terms of this Act “to administer its affairs in an economical, effective, efficient and accountable manner” (CoGTA, 2000, p. 46). The National Treasury has also provided a framework for managing programme performance information which serves as a guideline for all government entities in the national, provincial and local spheres of government (National Treasury, 2007).

As part of developing performance monitoring mechanisms, municipalities are also expected to put in place mechanisms for correcting and “improving performance with regard to those development priorities and objectives where performance targets are not met as well as establish a process for regular reporting to among others, council, organs of state, and staff of the municipality” (CoGTA, 2000, p. 48). The importance of this legislation is that it sets out what the municipalities can legally do and further compels the municipalities to be accountable for the performance or implementation of their programs.

The water services development plans (WSDP) of municipalities form part of the IDP (DWAF, 2004, p. 17) and are supposed to address both the potable (drinking) water and wastewater components. While the drinking water aspect should focus on the availability and supply of good quality water to existing and new development areas, the wastewater aspect should not only address access to sanitation services, but also address the capacity of existing infrastructure or facilities to accommodate additional waste loads emanating from new developments or settlements (Malzbender, Earle, Deedat, Hollingworth, and Mkorosi, 2009). Where capacity is about to be exceeded due to the proposed new waste load, the municipality should plan to upgrade the facility to ensure that it continues to operate optimally and to produce good quality effluent, fit for discharge into the receiving water environment. It is imperative for municipalities to monitor the compliance of both drinking water and wastewater facilities to ensure that the quality of water they produce complies with the norms and standards set by the Department of Water and Sanitation. Facilities that are authorised must be monitored to ensure that the quality of their effluent discharges comply with site-specific conditions of authorisation, such as water use licenses.

Accordingly, the compliance of effluent discharge qualities to set norms and standards in whichever form they exist must be subject of a performance management system where the superintendent of various wastewater treatment facilities account to their supervisors on regular basis through formal reporting. Furthermore, ad hoc reporting of incidents such as incidences of component malfunctioning resulting in partially treated effluent which does not comply to standards being discharged into the water resources, is also expected to be in place (DWAF, 2003). According to the Strategic Framework for Water Services (2003) of

the Department of Water and Sanitation, reporting on the quality of water discharged which includes the “volume of water discharged to the environment (and % of total discharge) which does not meet the standards,” is one of the nine key performance indicators expected to be reported by the water services authorities (DWAF, 2003).

However, water services authorities choose to exclude this key performance indicator, and focus on a broad category of “provision of basic services” where only statistics regarding the number of households supplied with sanitation and potable water are reported. The actual compliance of specific wastewater treatment facilities indicating the quality of the effluent discharged and its compliance status is not reported (CoGTA KZN, n.d., p. 24), which could create a gap in terms of putting corrective measures in place to address the deficiencies in such facilities which are needed to ensure that the facilities comply accordingly. It is curious to establish whether compliance status of wastewater treatment facilities is reported internally by those officials responsible for this function to their superiors.

Having said that, municipalities report the performance of their wastewater treatment works to the Department of Water and Sanitation through two programs, namely: 1). the Municipal Strategic Self-Assessment (MuSSA) and 2). the Green Drop Certification program. It must be mentioned that the MuSSA is a self-assessment of the municipality which focusses broadly on eighteen municipal water and sanitation business attributes. Although positive outlook on all eighteen business attributes may contribute to compliance by wastewater treatments works of a particular municipality, the assessment itself does not include wastewater treatment works compliance as one of its attributes. The various business attributes of the MuSSA are shown Figure 1.1 below (DWS, 2022). The green drop certification program was abandoned in 2014 and resuscitated in August 2021 whilst the MuSSA has been done selectively depending on the availability of the municipal top management rather than on all municipalities as a mandatory requirement. Furthermore, all three reports alluded to above are external accountability mechanisms since municipalities report to other organs of state. The focus of this study was to explore internal accountability mechanisms in what is commonly referred to as institutional (hierarchical) accountability mechanisms, where officials report to their superiors regarding the performance or compliance of wastewater treatment works. The research did not

cover the accountability of the non-technical officials, the Municipal Manager, and the members of council at the City of Mbombela Local Municipality.



Figure 1.1: Business attributes of the municipal strategic self-assessment (DWS, 2022)

The study was conducted at the City of Mbombela Local Municipality in Mpumalanga Province as a case study to describe the implementation of accountability mechanisms for wastewater treatment works. The City of Mbombela Local Municipality is a category B municipality located in the Ehlanzeni District of Mpumalanga Province. According to the municipality’s 2019 Spatial Development Framework Review document, the municipality has a population of approximately 729 464 based on the 2016 census and a population growth of 1.2% with 61% of the population being 29 years and below (City of Mbombela Local Municipality, 2019, p. 22). The proportion of households without income is estimated to be 13% (City of Mbombela Local Municipality, 2015, p. 19).

1.2. Problem Statement

Most municipalities in South Africa perform poorly with regard to the management of wastewater treatment works (WWTWs), notwithstanding the availability of accountability frameworks. For example, the DWS green drop assessment report showed that a total of 334 (39%) of 850 *municipal* wastewater systems were identified to be in a critical state in 2022, compared to 248 (29%) in 2013, which shows a worsening trend. Municipal systems that are in critical condition are listed from high to low showing that Limpopo has 78% of its systems in critical state, followed by Northern Cape (76%), North West (69%), Free State (67%), Mpumalanga (43%), Eastern Cape (39%), Gauteng (15%), KwaZulu Natal (14), and Western Cape (11%).

Studies conducted on water services tend to focus on potable water provision to the exclusion of wastewater treatment. Where wastewater treatment is considered for research, the focus is on the implementation of the green drop certification, the participation of municipalities in the green drop certification process as well as the program being informative and educational in nature and thus inherently building municipal capacity (Ntombela, Funke, Messner, Steyn and Masangane, 2016). Furthermore, a review of the literature shows that most accountability studies conducted focus on the impact of accountability on various socioeconomic aspects such as sustainable development (Gberevbie, Joshua, Excellence-Oluye and Oyeyemi, 2017), education (Arun, Adhikari, and Mohan (2020), health (Nxumalo, Gilson, Goudge, Tsofa, Clearry, Barasa and Molyneux, 2018). Recent studies on the accountability of South African municipalities focussed mainly on accountability for financial management (Nzama, 2022; Radebe, Razak, Nomlala and Mvunabandi, 2023). No studies have been conducted to determine how accountability frameworks are used in the South African water services sector regarding the management and operation of wastewater treatment works. The results of this study will provide a deeper understanding of the implementation of accountability frameworks in the water services sector and provide a solid foundation of the knowledge on which to build and engage accountability frameworks. This study will benefit the Department of Water and Sanitation as well as the water services sector in understanding the implementation of accountability frameworks on the performance of wastewater treatment works.

1.3. Research Purpose

The purpose of this research is to explore the implementation of accountability frameworks for wastewater treatment works at the City of Mbombela Local Municipality.

1.3.1. Research Objectives

To achieve the research purpose, the following objectives were formulated:

- To explore the concept of accountability using the City of Mbombela Local Municipality as a case study.
- To identify the challenges (weaknesses) in the implementation of accountability frameworks for wastewater treatment works that could be associated with the poor performance of wastewater treatment works.
- To formulate recommendations for the improvement in the implementation of accountability frameworks for wastewater treatment works.

1.4. Research Question

How are the internal accountability frameworks for wastewater treatment works implemented at the City of Mbombela Local Municipality?

1.4.1. Specific Questions

The research raises the following questions which were formulated to assist in answering the main research question:

- Is the implementation of accountability frameworks for wastewater treatment works at the City of Mbombela Local Municipality in accordance with the conceptual framework outlined in the prevailing literature?
- What challenges are faced by the City of Mbombela Local Municipality in the implementation of accountability frameworks for wastewater treatment works?
- What areas need improvement in the implementation of accountability frameworks for wastewater treatment works at the City of Mbombela Local Municipality?

1.5. Outline of the study

The study is structured into six chapters. The first chapter provides the introduction and background to the research topic. It highlights the purpose of the study and the problem investigated by the researcher. The objectives of the study are also outlined. Chapter two engages the literature review on accountability and the theoretical framework applicable to the research topic, while chapter three outlines the research designs and methodology employed to conduct the research. Chapter four present the findings of the study and explains the data analysis process that was conducted to assist in the interpretation of the data. Chapter five discusses what the results of the study mean, their implication and significance. Lastly, chapter six summarises the observations and conclusions of the study in relation to the research problem and makes brief recommendations for future research.

2. CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

Chapter one discussed the background and the general introduction to the study. An introduction on the roles of various institutions pertaining the water services function was outlined, with the municipalities playing a primary role. The challenges of managing municipal wastewater treatment works were outlined, including non-compliance to formal effluent discharge standards and site-specific conditions of water use authorisation. The purpose of the study, which is to explore the implementation of accountability frameworks for wastewater treatment works at the City of Mbombela Local Municipality, was also outlined.

Accountability is concisely described as “the obligation to explain and justify conduct” (Bovens, 2007). This simple definition implies a relationship between an actor, also referred to as an accountor, and a forum also referred to as an account-holder, or accountee (Bovens, 2007; Bovens, 2010). The actor could either be an individual such as a public official in a subordinate role, or it could also be an institution which accounts on its actions. Meanwhile, an account-holder could also be an individual or a public official in a supervisory role, or an institution such as an audit office or parliament, to which an account is provided (Bovens, 2007). This study explores how the account-holder keeps the account-giver accountable in respect of the function of managing wastewater treatment works at the City of Mbombela Local Municipality.

The Department of Water and Sanitation’s green drop assessment report shows that, notwithstanding the accountability requirements embedded in the “chain of command” through internal accountability mechanisms, municipal wastewater treatment works are performing poorly regarding the effluent discharge quality and other activities associated with the overall management of the wastewater treatment works. For example, the City of Mbombela Local Municipality owns a total of eight WWTWs. Three of these WWTWs (Kanyamazane, Kingstonsvale and Matsulu) are operated by an Independent Water Service Provider, Silulumanzi while the other five WWTWs (Hazyview, Kabokweni, Umjindi, Rocky’s Drift and Whiteriver) are operated by the municipality (DWS, 2023). Although all eight WWTWs have Water Use

Licenses (WULs) in place, no monitoring of effluent quality compliance is conducted in accordance with the WUL conditions at any of the WWTWs (DWS, 2023). Moreover, the Green Drop progress report for 2023 showed that five of the wastewater treatment works which are managed by the municipality perform poorly compared to the three which are managed by Silulumanzi. The WWTWs managed by Silulumanzi scored above 82% while those managed by the City of Mbombela Local Municipality scored below 52% (DWS, 2023). The finding of this study could shed some light on the accountability deficits instrumental to the resultant poor management of wastewater treatment works.

The remainder of this section outlines the major contestations on the definitions of accountability. The concept of accountability and the constitutive elements are discussed in detail. The various typologies of accountability dependent on the nature of an actor, the nature of the forum, the nature of conduct, and the nature of an obligation are also discussed. Lastly, the summary and theoretical framework of the study are presented.

2.2. The concept of accountability

The word 'accountability' has its historical origin from accounting, 'in its literal sense of bookkeeping' (Bovens, 2007, p. 448). According to Dubnick (2002), as cited by Bovens (2007) 'the roots of contemporary concept can be traced to the reign of William I, in the decades after the 1066 Norman conquest of England. In 1085 William required all the property holders in his realm to render a count of what they possessed. These possessions were assessed and listed by royal agents in the so-called Domesday books. This census was not held for taxation purposes alone; it also served as a means to establish the foundations of royal governance. The Domesday Books listed what was in the king's realm; moreover, the landowners were all required to swear of fealty to the crown. By the early twelfth century, this had evolved into a highly centralised administrative kingship that was ruled through centralised auditing and semi-annual account giving' (Bovens, 2007, p. 448). Accountability therefore has its roots in the financial sector where it was used as a way to ensure the alignment of interests between the shareholders as owners of the company and the executive management who manage the business on behalf of the

shareholders. While historically it was the sovereigns who kept their subject accountable, accountability has evolved to the extent that the reverse is now the case where authorities are the ones being held accountable by society.

Although accountability has been a buzzword for several decades, it remains an elusive concept (Lindberg, 2013; Overman, Schillemans, and Grimmelihijsen, 2021). “It can mean many different things to different people” depending on their professional orientations (Bovens, 2007, p. 448). It is considered to be a ‘golden concept’ that is readily accepted by everyone as a ‘virtue or a positive quality of organisations and officials’ (Bovens, Schillemans and T’Hart, 2008). According to Bovens (2007), the most concise description of accountability is “the obligation to explain and justify conduct”. Bovens (2010) further explains the expansive nature of accountability and that various researchers use their own definitions. He opines that the concept “has come to stand as a general term for any mechanism that makes powerful institutions responsive to their particular publics” (p. 947).

Scholars in the public management space such as Romzek and Dubnick (1998) defined accountability as “the means by which public agencies and their workers manage the diverse expectations within and outside the organisation” (p. 228). Their perception of accountability focused on multiple accountability forums to which actors must give accountability. Indeed, many studies have demonstrated the ‘multiple accountability expectations faced by public organisations’, in what has been described as a ‘web of accountability relationships’ (Brandsma and Schillemans, 2012; Hwang, 2023). Many researchers documented the proliferation of public agencies at the beginning of the 21st century as a reason for the blurring of and development of multiple accountability forums. This trajectory was reportedly occasioned by the adoption of private sector practices which were the subject of benchmarking and analysis of good practices, by various states with the intention of implementing them in the public sector. Consequently, most states established private agencies with the objective of providing them with autonomous powers to manage certain services on behalf of the government (Alamaa, Hall, and Lofgren, 2024). The government as the owner of the work would then assign the work to the state-owned enterprise whilst it assumes an oversight role through the relevant minister. This is consistent with Keremidchiev and Nedelchev’s (2020) research on theories of corporate governance at state-owned enterprises in which accountability

was equated to the 'comply or explain' principle, where 'attempts to introduce foreign practices into national government' (p. 62) were reported.

Notwithstanding the multiplicity of accountability definitions and the divergence of interpretations from various disciplines, there is a broad consensus on the relational aspects of accountability, which 'refers to a specific social relation or mechanism that involves an obligation to explain and justify one's past conduct' (Brandsma and Schillemans, 2012, p. 3; Aliyu and Lawal, 2024). Bovens (2010) characterised two concepts of accountability, which he ascribed geographically to the American academic and political discourse and the British, Australian, Canadian and continental European scholarly debates. The two schools of thought differ in their emphasis of accountability in that the former focusses on the normative concept of accountability where accountability is seen as a virtue and as such studies focus on standards for and the assessment of actual behaviour of public officials. This is consistent with what de Boer (2021) labelled the 'logic of appropriateness', where actors or officials act in accordance with what is internally prescribed and socially classified as normal, right, or good. For example, Bovens (2010) found that researchers investigating this concept of accountability focus on the conduct of actors and assess whether officials or organisations complied with good governance standards. This concept of accountability is fluid and has been found to be conflated with "transparency", "responsiveness", or "responsibility" and sometimes used as a synonym for "deliberation", "participation" and "involvement" and has therefore been loosely defined as a 'desirable quality of officials, government agencies or firms' (Bovens, 2010, p. 949). The main criticism of this accountability concept is the fact that there is no consensus regarding standards for accountable behaviour. This makes accountability as a virtue relatively difficult to define because there are different standards depending on the institutional context and political systems and perspective (Bovens, 2010).

Meanwhile the latter school of thought emphasises accountability as a social mechanism, an institutional arrangement where an actor can be held accountable by another actor. In this case, the studies do not focus on the behaviour of officials, but rather on the way in which the institutional mechanisms or arrangements are implemented. This concept of accountability is consistent with what de Boer (2021) referred to as the 'logic of consequence', and there is a degree of consensus on the

definition of this concept of accountability since most recent public administration studies refer to Bovens' 2007 conceptualisation of accountability definition (Overman, Schillemans and Grimmelikhuijsen, 2021; Aliyu and Lawal, 2024; Alamaa, Hall and Lofgren, 2024). Bovens (2007) therefore defines the relational concept of accountability as follows:

“Accountability is a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgement, and the actor may face consequences”.

He contends that this implies a relationship between an actor and a forum. Mees and Driessen (2018) agreed with this notion of accountability by indicating that there are two constitutive elements of accountability. First, they identified accountability as a relational concept that involves the interaction between two or more parties. Secondly, they identified answerability as the most important characteristic of accountability.

Bovens' definition of accountability is made up of three phases or elements, which are: information phase, discussion phase, and consequence phase. In the information phase, the actor provides an explanation and justification for their past conduct (Bovens, 2007). This phase also involves the justification and explanation by the actor, in cases where there is failure. In his study to assess the accountability of nonprofit organisations, Ebrahim (2003) identified the importance of aligning expectations between the actor and the forum to ensure that consensus is reached regarding the type of information required. This is consistent with the assertion by Witvliet *et al.* (2023) who reported that 'people in accountable relationships benefit from clear roles and shared understanding of expectations about who answers to whom, for what responsibilities, and to what end' (p. 661). It must be emphasised that this concept of accountability assessment is performed after the fact.

In the discussion phase, the forum possesses the possibility to question and interrogate the information provided for suitability and/or adequacy and where necessary the forum may also ask for additional information or clarity (Bovens, 2007). Brandsma and Schillemans (2012) assert that this is the most critical phase of the accountability mechanism. In the consequence phase, 'the forum may *pass judgment* and implement sanctions'. In other words, concerns and thoughts may be shared

with the actor regarding the legitimacy of his conduct. Judgment may take the form of corrective measures, punishment or reward (Bovens, 2007).

These three phases are logically connected in that the accountability information comes before the discussion on the assessment of the conduct of the actor which in turn comes before the sanctions (Brandsma and Schillemans, 2012). The phases follow each other in that sequence, although in practice the phases may overlap each other. Contrary to Bovens's three phase model, Lindberg (2013) documented five defining characteristics of accountability, which include 'an agent (A) or institution that provides accountability; an area, responsibility, or domain (D) in which the agent provides accountability; the principal (P) or institution to whom an agent is to give an account; the right of the principal to require an agent to inform and explain or justify decisions with regard to the domain for which they are responsible; and lastly, the right of the principal to sanction the agent if the agent fails to inform and explain or justify decisions with regard to their domain' (Lindberg, 2013, p. 209).

These characteristics were listed from a review of the literature by Lindberg (2013) which appeared to comprise those elements. A study by Mees and Driessen (2018) concurred with a broad definition of 'accountability as a relationship between an actor and a forum, in which the actor has an obligation to explain and justify his or her conduct, the forum can pose a question and pass judgement, and the actor may face consequences' (p. 673). Notwithstanding the different characterisation by Lindberg who identified five characteristics, the accountability concept that he described remained virtually similar to Bovens's conceptualisation.

According to Lindberg (2013), accountability is one of the phenomena that is generally categorised as a constraint mechanism or "a method of limiting power" (p. 205). He argues that "the more the people are watched, the better they behave and furthermore, that people give an account only when it is requested, and only when that request is backed by power" (p. 208).

Farrell (2024) in his study of accountability as a mechanism and a virtue in Irish public sector recordkeeping, found that the National Archive Institute failed to hold public bodies to account due to the prevailing legislation not giving it the authority to transfer their records to it and also disposing of records without its authorisation. This

is supported by Burga and Rezania (2017) who associated accountability with “effective governance and control of individual and organisational behaviour” (p. 1025). A parallel argument which is also in support of accountability as a constraint mechanism relates to agency theory, which is predicated on the notion that agents have a propensity to maximise their own utility rather than that of the principal based on the extent to which a constraint allows them to (Burga and Rezania, 2017). An empirical study conducted in Nigeria presented evidence that corruption, poor leadership, and management of resources as well as unethical behaviour provide a good environment for accountability failure (Gberevbie, Joshua, Excellence-Oluye and Oyeyemi, 2017).

Accountability is therefore reported to be an obligation of an agent for account giving to a party with authority to impose sanctions or rewards. Furthermore, Overman and Schillemans (2021) have revealed two important factors that enhance the effectiveness of accountability mechanisms. The first is the anticipation of the actor to be held accountable for their conduct in the future. Alamaa, Hall and Lofgren (2024) argued that ‘the expansion of organisational professionals is linked to an increased focus on organisational accountability’. They asserted that creating a pool of high-skilled administrators in an organisation, which they termed professionalisation of the bureaucracy, leads to officials’ expectation to be held accountable by some higher authority at some stage.

The second is the nature of the audience. This explains yet another typology of accountability called felt accountability defined by Hall and Ferris (2010) as cited in Overman and Schillemans (2021, p. 13). They define it as:

an implicit or explicit expectation that one’s decisions or actions will be subject to evaluation by some salient audience(s) with belief that there exists the potential for one to receive either rewards or sanctions based on this expected evaluation.

The nature of the audience is further subdivided by Overman *et al.* (2021) who identified two core elements of the nature of the audience, which explains the perception of the actor towards the ability of the forum to hold them accountable. The first is ‘the perceived legitimacy to exercise authority’ (p. 1754). In other words, the actor must implicitly accept the authority of the forum. This implies that the actor

accepts the evaluation role of the forum as 'desirable, proper, or appropriate' and thus engender the actor's preparedness to obey.

The second is that the forum or account holder should possess the expertise to oversee and assess the tasks delegated to the actor. This situation will result in the actor putting more effort in preparing a response to accountability if they perceive the assessor as an expert.

There is a widely held assumption that increased accountability should result in improved individual and organisational performance and behaviour. To the contrary, Hwang (2023) examined the relationship between accountability and performance in child-welfare services in the State of Virginia and found that hierarchical accountability did not have an effect on work performance. Hall, Frink, and Buckley (2017) also support the notion that without accountability, officials often act without any consideration of possible consequences. However, empirical evidence to that effect is inconclusive (Christensen and Laegreid, 2014).

This study is aligned with the concept of accountability as a social mechanism and institutional arrangement which assesses how institutional accountability mechanisms are operated or implemented. The relational aspects of accountability are detailed in the next section.

2.3. Accountability relationships

According to Bovens (2010, p. 951), "the actor may be either an individual, for example an official or civil servant, or an organisation, such as a public institution or an agency. The significant other, the accountability forum, can be a specific person, such as a superior, a minister, or a journalist, or it can be an institution, such as parliament, a court, or the audit office".

Accountability is considered to be a relational concept which is based on the relationship between two actors and is predicated on Principal-Agent (P-A) theory. In the P-A theory, the roles of the two agents are defined where the agent is answerable to the principal in a hierarchical relationship (Han, 2019). The principal

assigns the responsibility to the agent to act on his or her behalf and thus the agent is deemed to act in their interest. Meanwhile, the relationship does not always work as intended, resulting in “accountability deficit”. In this case of accountability failure or deficit, an actor does not always act in the best interest of the principal in what Han (2019) termed “drifting agents”. Furthermore, the accountability relationship can also fail because of the principal who does not conduct the assessment necessary for him or her to ensure that the agent explains his or her actions. This phenomenon he termed “drifting principals” (Han, 2019). A project accountability study by Burga and Rezania (2017) underscored the critical nature of accountability relationships using an actor-network theory (ANT) where the agent reported to a network of principals due to the complexity and dynamic nature of stakeholders involved in the project.

Accountability relationships can be vertical or horizontal depending on the nature of reporting structures (Schillemans, 2008). Vertical accountability is hierarchical in nature and reflects administrative reporting lines between a supervisor and subordinate but extends to parliamentary committees while horizontal accountability reflects reporting to external agencies such as citizens, professional bodies, and other government agencies for example (Schillemans, 2008). The dynamic nature of the relationships between the actor and multiple accountability forums, which give rise to different types of accountabilities, is detailed in the next section.

2.4. Types of accountabilities

The diversity and complexity of decision making within the public service has been detailed by Schillemans (2015) who indicated that two generic types of decisions exist with some decisions considered “good” professional judgments requiring high level of cognitive complexity especially for professionals and managers while others require accuracy, compliance and meticulous attention to detail. Schillemans (2015) contends that accountability stimulates public institutions and managers operating in sectors that require high level of complexity to take well considered decisions whereas public managers deciding on public benefits such as grants and subsidies would find paying attention to detail as an important aspect of their decision making. Furthermore, public institutions are expected to account for their conduct to different

forums. Bovens (2007) identified four distinct constitutive elements of accountability which he demonstrated in the model below (Figure 2.1):

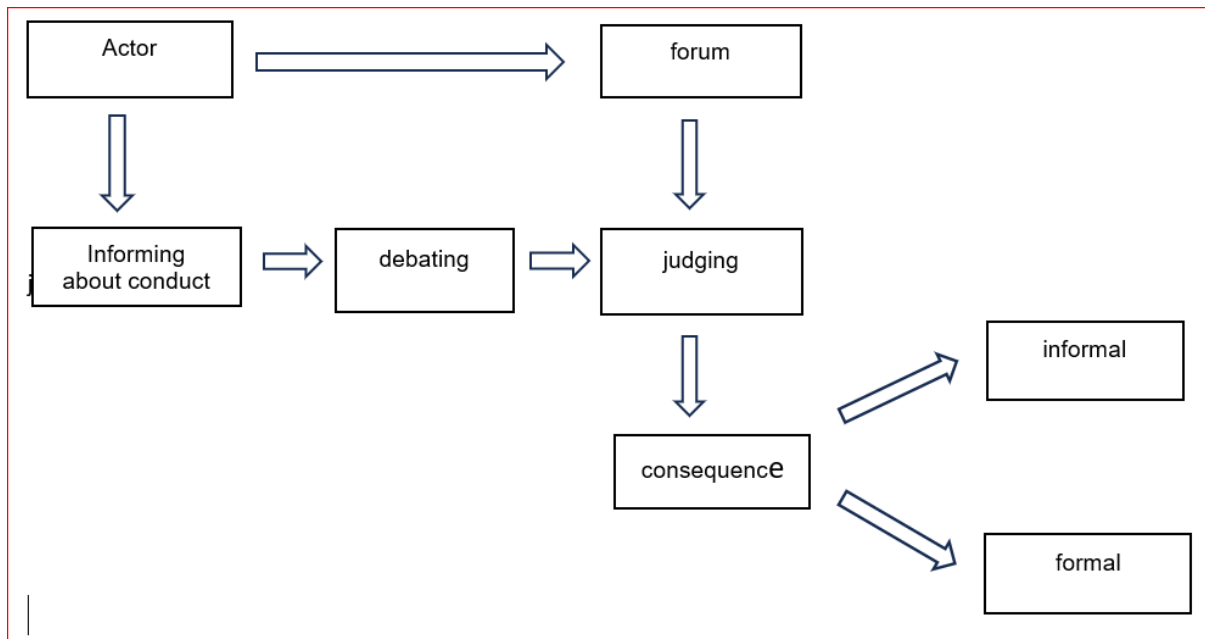


Figure 2.1: Schematic showing constitutive elements of accountability (Bovens 2007).

To assist in explaining the accountability processes involved, Bovens used four essential questions, the *first* of which is: To whom the account is to be rendered? This question assists in classifying the type of forum to whom accountability is to be rendered (Bovens, 2007). Scholars in the public management field have shown that public institutions and officials in democratic regimes have to contend with a multiplicity of forums which demand different types of information and inadvertently apply different criteria to what is considered appropriate conduct (Bovens, 2007; Overman and Schillemans, 2021). Bovens (2007) put it succinctly when he said “they [actors] are accountable to a plethora of different forums, all of which apply different set of criteria” (p. 455). He distinguished four different types of public accountability.

The *first* is political accountability, which has been deemed very critical in democratic environments and where expectations are shaped by political demands. This type of accountability includes elected representatives, political parties, voters and the media. According to Brandsma and Schillemans (2012), public institutions are seen as a “chain of delegation” with multiple relationships between those delegating the responsibilities and those whom the responsibilities are delegated to. This “chain”

starts with the voters delegating their power to politicians who represent them in parliament, who in turn delegate to the government their authority to govern. The media in many democratic environments play the role of informal forum that hold elected representatives accountable (Bovens, 2007).

The *second* is legal accountability which includes the courts and constitutional institutions with quasi-legal mandates such as ombudsman's office, public protector, human rights commission, competitions commission (Bovens, 2007; Bovens, 2010). The expectations for accountability are shaped by regulations, policies, and laws. In this type of accountability, the forums exercise coercive power which assists in creating checks and balances on the abuse of power by public institutions and officials (Bovens, 2010).

The *third* is bureaucratic accountability, which is also referred to as administrative accountability. In bureaucratic accountability, the accountability expectations develop from bureaucratic hierarchies that involve quasi-legal institutions such as the Auditor General's office. The offices of the Auditor General do not only scrutinise probity and the lawfulness of public expenditure but includes efficiency and effectiveness. The basis of their regulatory scrutiny is regulations, policies, and laws as well as prescribed norms and standards.

The *fourth* is professional accountability where expectations are shaped by professional norms, values and standards set by professional peers. It must be borne in mind that most public officials are also professionals over and above the designations of their institutional responsibilities, such as lawyers, doctors engineers and accountants (Bovens, 2007). Consequently, the professional bodies prescribe codes that determine the acceptable norms and standards for their profession and subsequently monitor and enforce such standards (Bovens, 2007).

The *fifth* is social accountability which includes interest groups, charities and other stakeholders. These groups have tended to hold public institutions accountable due to perceived trust deficits between public institutions and society. Public institutions and individual managers or officials should therefore be obligated to account to the public on their conduct and performance (Bovens, 2007) since they receive and

handle public funds. These typologies of accountability are based on the nature of the forum.

The *second* logical question which assists in explaining the accountability processes involved is '*who* should render the account'. While the challenge faced by actors having to account to multiple accountability forums is widely reported, the notion of multiple actors is not so common. Bovens's analysis of accountability show that multiple actors manifest from the early departure and replacement of elected political office bearers or senior administrative officials before the implementation of their policy initiatives which result in poor outcomes where there is no clear indication of who should be held accountable for the poor performance. This is because the initiative would have been handled by different individuals who did not see the initiative from the beginning to its logical conclusion (Bovens, 2007), or worse, who did not know what the vision of the originator of the policy initiative was. Based on these failures, the question then is who should be held accountable. Four possible entities could be held accountable, which is the institution as a legal entity, in what he termed corporate accountability.

The second is hierarchical accountability where the head of the organisation could be held accountable as the accounting officer (Bovens, 2007; Overman and Schillemens, 2021). Thirdly, since an institution is a collective of individuals, the forum could also hold any member of the institution accountable on behalf of the institution since the individual is a member of the institution. The last option is individual accountability where individual officials are held proportionately accountable for their role in the failure (Bovens, 2007). According to Bovens, (2007), this type of accountability is similar to professional accountability, such as in the case of medical practitioners who are held to account for compliance to the requirements of their professional standards.

The *third* question which assists in explaining the accountability processes involved is '*about what* is the accountability to be rendered'. This is important in aligning expectations between the actor and the forum since in some instances, the actor may be expected to account for the process of decision making or the outcome of a decision. It clarifies the standard of success by the actor. It is important to note that the targets in a professional environment cannot be prescribed unilaterally by the

accountability holder (Overman and Schillemens, 2021). The assessment on the type of information to be provided has shown that in most instances, accountability is related to the forum to which the accountability is provided. For example, where legal accountability is provided, the assessment will be based on the legality of the actor's conduct. Similarly, where an audit assessment is conducted, the accountability will be classified as financial accountability (Bovens, 2010).

The *fourth* question which assists in explaining the accountability processes involved is 'why the actor feels obliged to render the account'? It explains the nature of the relationship between the actor and the forum. The reasons why an actor would give accountability is dependent on two possibilities. Either because they are forced to or because they volunteer to do so (Bovens, 2007; Bovens, 2010). The actor is ordinarily forced to account on their conduct when the forum has power or authority over them in what Bovens refers to as vertical accountability. The authority has also been reported to derive from their legitimacy and expertise to conduct an assessment of the information provided. The nature of the relationship then is hierarchical between the actor and forum such as in subordinate and supervisor, or agent and principal. Political accountability mechanisms between the minister and parliament are also vertical accountability mechanisms. So are the accountability mechanisms between public agencies and ministers (Romzek and Dubnick, 1987; Bovens, 2007; Bovens, 2010).

Although legal or professional forums have authority over actors, the nature of their relationship is not hierarchical since the forum is an outside agency. The accountability arrangement is therefore horizontal, including other forums where voluntary accountability is rendered such as the general public (Bovens, 2007). Diagonal accountability obtains in situations where public institutions as actors account to other authorities such as Auditor General, Public Protector or Human Rights Commission. In this accountability arrangement, the accountability forums have limited authority over the actors since they do not have direct hierarchical relationships with the actor. However, because of these accountability forums reporting to Parliament, they derive authority from this relationship (Bovens, 2007). Bovens (2007) describes 'this indirect, two-step relation with a forum as diagonal accountability' (p. 460). The typologies of accountability documented by Bovens provide scholars with an assessment tool that assists in determining the types of

accountabilities involved based on the focus of the assessment. The focus may be in any of the areas including the nature of the forum, nature of the actor, nature of the conduct or nature of obligation (Bovens, 2007). This is shown in the schematic presented in Appendix E.

Another phenomenon which has been identified by scholars in political and public administration fields is the lack of engagement by account-holders. The rationale for account-holders not engaging has been attributed to the lack of the requisite capacity, skills, knowledge or resources to assess complex information provided by the actor (Schillemans and Busuioc, 2014). Further that forums may also be blamed for unpopular decisions. It has also been reported that sometimes the accountability forum delegates the tasks to the actor without stipulating goals, and thus leaving the determination of such goals to the actor. Schillemans and Busuioc have found that although not all actors resort to this, they however adopt voluntary accountability mechanisms and solicit parliamentary hearings and other forms of accountability in an attempt to address the accountability gaps that arise as a results of “forum drift”. “Forum drift” implies a situation where the accountability forum fails to hold the actors accountable and seem to be completely disinterested (Schillemans and Busuioc, 2014).

The typologies of accountability which have been explicated in this section are based on the definition of accountability as a social and relational mechanism and as an obligation. The next section will elucidate another type of accountability where an obligation to provide the information is absent.

2.5. Voluntary accountability

Contrary to Bovens’s definition of accountability as an obligation (Boven, 2007), actors have also been found to voluntarily explain and justify their conduct (de Boer, 2021; de Boer, 2023). The phenomenon of voluntary accountability is well-established in modern democratic societies and studies have documented the adoption of these practices where public institutions and officials render accountability without any formal obligation to do so (de Boer, 2021). Modern institutions take advantage of existing technologies to provide information about their institutional performance and decisions on various platforms such as websites and

social media platforms. Accordingly, those institutions providing information through these online platforms consider these practices as accountability. This was revealed in a study of European Union (EU) agencies where various participants were interviewed on the accountability mechanisms of their agencies (de Boer, 2023). However, de Boer argued that the alleged accountability mechanisms (platforms) do not meet the threshold of accountability. He did not ascribe this to the absence of an obligation alone, but also to the absence of the debate or discussion phase where the actor is expected to provide explanation and justification for their performance or conduct compared to Bovens's concept of 'mandatory accountability'. It has been argued that this phenomenon (voluntary accountability) should rather be classified as transparency, openness or information provision which are distinct concepts in their own right (de Boer, 2021). This assertion was made on the basis that the voluntary accountability does not ensure that an assessment of the actor's conduct or performance occurs, and that the possibility of sanctions exists. Voluntary accountability is therefore defined as:

'a relationship between an account-giver and an engaged account-holder, in which the account-giver voluntarily commits to offering information on, and explanation of, its conduct and may face consequences' (de Boer, 2021, p. 1136).

What distinguishes voluntary accountability from its counterpart, also referred to as 'mandatory accountability' (by de Boer, 2021) for the purpose of differentiation, is that the obligation aspect in the voluntary accountability is absent in all three phases (information, discussion and consequence) (de Boer, 2021). Furthermore, in 'mandatory accountability', forum engagement occurs in all three phases, but in voluntary accountability it occurs only in the information phase. In other words, in the information phase, there should be voluntary commitment from the actor or commitment by the actor to provide information, as well as engagement from the forum (de Boer, 2021). de Boer argued that any process that stops after voluntary provision of information does not qualify as accountability. Further that maintaining a website does not necessarily result in those that visit the website engaging the institution to justify their conduct or performance. This leads to the second phase of voluntary accountability, which is also complementary, where there has to be an engagement from the forum. This implies the presence of an account-holder who does not only accept, but is willing to conduct an assessment of the information provided on the website and pass judgment (de Boer, 2021). In other words, not

every publication of information on the website will result in accountability, hence the assertion that “maintaining a website does not qualify as accountability when forum engagement is largely a hypothetical scenario without much precedent in reality” (de Boer, 2021, p. 1137). This form of accountability is not aligned to the current study since the current study focuses on accountability from those assigned the responsibility of managing WWTWs to their superiors, and not on publication of information on websites or other platforms such as social media. Furthermore, the expectation is that the superiors will demand the information from the actors and conduct an assessment of the information provided with the possibility of passing judgment.

In an attempt to understand the concept of voluntarily accountability, de Boer (2023) investigated the rationales for the self-imposition of accountability by actors. This assisted in the differentiation of mandatory accountability from voluntary accountability since in the former, the actor is obligated to provide the information while in the latter the actor provides the information voluntarily (de Boer, 2023). He identified two broad categories predicated on the types of audiences or forum, and devised a model shown in Figure 2.2.

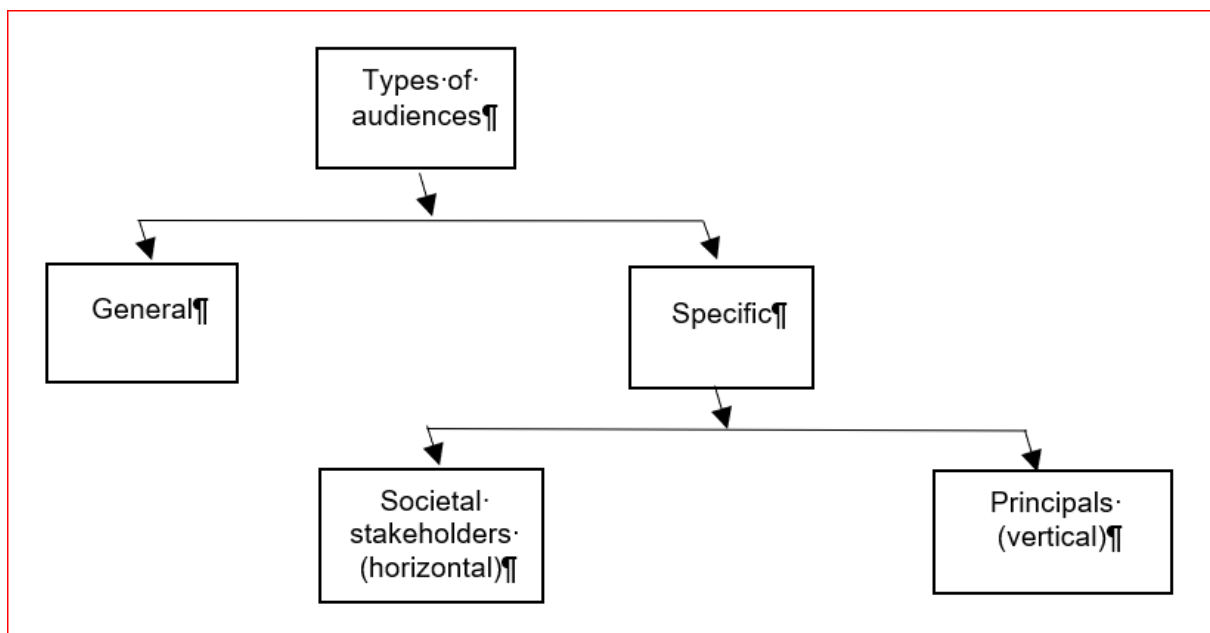


Figure 2.2: Schematic showing the types of audiences for voluntary accountability (de Boer, (2023)).

According to de Boer (2023), the rationale for providing voluntary accountability towards the general audience or forum involved explaining and justifying the conduct of the institution to a wider, often unknown stakeholders while voluntary accountability to specific audience or forum was targeted. Specific audience or stakeholders were found to comprise two categories of broader society on the one hand, which constitutes horizontal accountability, and the principals or superiors on the other hand, which constitutes vertical accountability (de Boer, 2023). This categorisation is consistent with the typologies of accountability explained by Bovens who described horizontal, diagonal and vertical accountability.

The rationale for voluntary provision of information is varied and straddles different types of motivations which were explicated by de Boer (2023). For example, in democratic motivations, which encompass the logic of appropriateness, the actors prescribe rules and regulations including values and missions which stipulate public participation and involvement as good governance practices, and the actor attempts to demonstrate good use of public funds. In reputational motivations, the actor showcases good aspects of the institutions such as success, but also importantly, they track the perceptions of their stakeholders. The third motivation is effectiveness motivations in which the actor shows how they implement their policy mandates. The fourth motivation is the learning motivations where the actor targets groups of stakeholders who possess certain skills and knowledge from which the actor (institution) would benefit. The final driver of voluntary accountability is financial motivations where the actor targets principals with the intention to gain financial support (de Boer, 2023).

Democratic motivations were found to be the driver of voluntary accountability when the audience is general where the actors feel obligated to account to their citizens or stakeholders as one of the values of good democratic governance. This notion is supported by Alamaa, Hall and Lofgren (2024) who posit that 'accountability is a central value in public service'. In addition, reputational and effectiveness motivations were found to be significant drivers for voluntary accountability across all audiences. Voluntary accountability towards the principals or superiors were driven by a combination of effectiveness, reputational and financial motivations. In other words, the agencies advance their effectiveness and reputations by voluntarily providing

information to their principals and are likely to secure financial support in the future as a result of their voluntary engagement with the principals.

de Boer (2023) has also found that in some instances, voluntary accountability does not occur proactively, but rather reactively and defensively to counter public criticism or negative media coverage. In other words, actors clarify negative perceptions held by stakeholders by arranging media statements or appearing at certain platforms to set the record straight and in the process, they also manage their reputations.

2.6. Theories applicable to accountability

Schillemans and Bjurstrøm (2020) identified two broad categories of public administration theories which differentiate instrumental and value rationalities. Value or trust-based theories have been associated with the “logic of appropriateness” while instrumental or control-based theories are consistent with the “logic of consequence”. Both these concepts were discussed earlier in this study. Theories aligned to the “logic of appropriateness” include stewardship theory and stakeholder theory (Bello and Abu, 2021). The stewardship theory assumes that a steward or public official is a loyal, good, and honest steward who always puts institutional goals above self-interest. It also assumes that the steward will not act to maximise his own utility nor act opportunistically, and that there is thus no reason for the superior not to trust the steward to perform his assigned responsibilities as expected (Schillemans and Bjurstrøm, 2020). Meanwhile, stakeholder theory is reported to be similar to stewardship theory, but broader due to its inclusion of other stakeholder groupings both internally and externally such as suppliers, employees, creditors and general public of for instance (Bello and Abu, 2021). This category of theories is deemed not suitable to this study since the poor performance of WWTWs does not indicate that those assigned the responsibility to manage them are good stewards who perform the tasks as expected.

The second category of theories aligned to the “logic of consequence” includes the shareholder theory and the principal-agent theory commonly known as the agency theory (Schillemans and Bjurstrøm, 2020). “The shareholder theory states that the sole object of management is maximising shareholder value because managers are employed as agents by the shareholders to operate the business for the principals’

benefit” (Bello and Abu, 2021, p. 94). It is therefore assumed that the managers have a moral and legal obligation to manage the business in order to increase the net-present-value of the shareholders (Squires and Elnahla, 2020). O’Connell and Ward (2020) rationalised that managers agreed with the notion of maximising the net-present-value of shareholders as the primary objective since they feared hostile take-overs of their institutions by competitors. This implied that the interest of the shareholders and that of the managers were in congruence.

Similar to the shareholder theory, the principal-agent theory is also based on the relational contract in “which one party (the principal or shareholder) engages another party (the agent or directors) to perform some services” on behalf of the principal (Schillemans and Bjurstrøm, 2020). However, what distinguishes the principal agent theory from the shareholder theory is the fact that in the principal agent theory, it is assumed that the interest of the principal and that of the agent are not in congruence (Squires and Elnahla, 2020). The agent is assumed to deviate from the interest of the principal and engages in opportunistic behaviour and self-serving interest. This misalignment then results in the interest of the principal being subverted. As mentioned earlier, the interest of the principal is maximisation of net-present-value.

In the context of this study, the maximisation of net-present-value for the principals is equated to the optimal operation and maintenance of WWTWs ensuring that they comply with formal effluent discharge standards or site-specific conditions of water use authorisation. The owner of the job (principal) is the Department of Water and Sanitation which assigned the water services function to municipal councils. Municipal councils in a long chain of accountability delegated the function to the City Manager and his/her administrative personnel all the way down to the process controllers who operate the WWTWs on site. Consistent with the responsibilities reflected in table 4.1, various positions in a long chain of accountability play both the role of the principal and that of the agent depending on the situation. So, when they account to their superiors they become the agent, but when they hold subordinates to account, they become the principal. The agent is therefore expected to ensure optimal operation and maintenance of WWTWs, which culminates in compliance with formal effluent discharge standards or site-specific conditions of water use authorisations.

The poor performance of WWTWs assumes that there is misalignment between the interests of the principal and that of the agent, and that the agent is engaging in activities that do not benefit the principal. Hence the shareholder theory was deemed unsuitable for this study since it assumed congruence between the principal and the agent. It is the poor performance of WWTWs which lead to the assumption that there is misalignment of the interest of the principal and the agent, and the principal-agent theory being deemed the relevant theoretical framework for this study.

The next section provides the rationale for the choice of the principal agent theory as a suitable theoretical framework and describes how it was used as a lens to assess accountability mechanisms for the management of WWTWs at the City of Mbombela Local Municipality.

2.7. Theoretical Framework.

Government agencies implement various programs to provide basic services to the citizens (Christensen and Laegreid, 2014; Alamaa, Hall and Lofgren, 2024). The use of public resources to generate public value requires accountability from those entrusted with their use. The green drop progress report (2023) has recorded that WWTWs perform poorly with respect to compliance to formal effluent discharge standards and site-specific water use authorisations. In this context, the researcher assumed that something could be wrong with the accountability mechanisms for managing WWTWs at the City of Mbombela Local Municipality.

This study used the principal-agent theory as a theoretical lens to explore accountability in the performance of WWTWs at the City of Mbombela Local Municipality. The first rationale is because the principal-agent theory is touted as the most suitable theory to assess accountability. For example, Schillemans (2014, p. 4) reported that “in accountability studies, principal-agent theory is the natural and customary theoretical approach”. The second rationale is that the principal-agent theory starts from the assumption that there is misalignment of interest between the agent and the principal, and the agent maximises their own utility rather than serving the interest of the principal. The theory also assumes that the principal as the owner of the work is actually eager for the work they have delegated to be performed

effectively (Schillemans and Busuioc, 2014). Hence, the poor performance of WWTWs which is considered to be a deviation from the interest of the principal, lead to the principal-agent theory being deemed the relevant theoretical framework for this study.

Vertical (hierarchical) accountability, where a superior (principal) holds his subordinates to account for the tasks assigned to them, is a typical example of principal-agent theory. This study focuses on the relational aspect (mechanisms) of accountability between superiors and subordinates rather than the normative aspect which prescribes the standards for good governance and conducts assessment of behaviour of an actor based on such standards. In this context, superintendents responsible for the operation and maintenance of WWTWs report vertically to Senior Engineering Technicians (supervisors). The Senior Engineering Technicians also report to the Senior Manager who reports hierarchically to the General Manager. Hierarchical accountability presumes that superiors have authority to call their subordinates to account on the performance of the WWTWs assigned to them based on the agreed performance criteria (Christensen and Laegreid, 2014). Superiors in an accountability chain from superintendent up to general manager can then assess the performance and issue rewards, correction, or punishment.

The next chapter explains the choice of methodological approach as well as provide justification for the choice thereof, including participant recruitment criteria, methods of collecting data, and methods of analysing the data collected.

3. CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

This chapter explains the rationale for selecting the research design employed in the study and provides an outline of how the research design was executed. It further describes the process followed in recruiting participants, collecting, and analysing data.

3.2. Research design

The research adopted a qualitative research approach and an interpretivist paradigm to understand and describe the implementation of accountability frameworks for wastewater treatment works at the City of Mbombela Local Municipality as well as who is involved (Bryman, 2012). Lester, Cho and Lochmiller (2020) opined that “broadly, qualitative research is generally employed to support a researcher in generating a deep and nuanced understanding of a given phenomenon”. This research approach was suitable for the study due to the subjective nature of the data that was collected and how it is influenced by practitioners operating within their environment and the context within which the study is conducted (Wagner, Kawulich and Garner, 2012). Various elements or features that constitute the accountability frameworks for wastewater treatment works were described. Furthermore, the context specific “multiple socially constructed realities” that occur at the research site were described and understood. The research design utilised was case study which enabled the research to deepen the understanding of the implementation of accountability framework through descriptive research analysis. The study was limited to the accountability of responsible officials and organisational performance as it pertains to the management of sewage works. For purposes of this study, performance implies compliance since compliance of WWTWs is a performance measure where compliance of WWTWs denotes good performance and vice versa. The research did not cover the accountability of the non-technical officials, the City Manager, and the members of council at the City of Mbombela Local Municipality

3.3. Research tools and their application

A semi-structured approach to data collection was adopted for this research. According to Braun and Clarke (2013, p. 78), semi-structured interviews are “sometimes called the interview guide approach”. Semi-structured interview approach allows the researcher to provide the participants with an opportunity to discuss issues of importance to them even if such matters are not included in the interview guide (Braun and Clarke, 2013). The researcher did not rigidly adhere to the interview guide. This approach was aligned with the purpose of the study since it promoted the collection of data through rich description of the practitioners’ experiences in the implementation of accountability frameworks (Braun and Clarke, 2013).

The questions that were asked depended on the developing account of the participants, but participants were not allowed to deviate from the information the research sought to collect. The questions were categorised into specific themes to assist in the analysis and interpretation of data once collected. Some of the interviews were conducted via Microsoft Teams (virtual interviews) while some were conducted face to face depending on the participants’ preferences. Although “virtual interviews are seen as poor substitute of traditional face-to-face interviews” by some, they have also been seen as “extensions of traditional interview method rather than substitutes for it” (Braun and Clarke, 2013, p. 79). The interviews were recorded with the permission of the participants.

3.4. Sampling

The sampling method was purposive in nature since the experts whose responsibility it is to manage wastewater treatment works and their supervisors were the most suitable to provide the information required. Purposive sampling is described as “a mode of sampling typical of qualitative research, involving the selection of participants or data on the basis that they have certain characteristics or experience” (Braun and Clarke, 2013, p 335). This is supported by Johnson, Adkins, and Chauvin (2020) who assert that “the research question may be best answered by persons who have particular experience (critical case sampling) or certain expertise (key informant sampling)” (p. 141). In this study, data was collected from the officials of the City of Mbombela Local Municipality responsible for the operation and

management of wastewater treatment works. It included the hierarchy from the superintendents of a wastewater treatment works up to the general manager. Vertical (hierarchical) accountability requires each official to account to their supervisors regarding the responsibilities assigned to them.

The participants responses have not been disclosed, and no one would be able to attribute responses to individual officials. Furthermore, the research report does not reflect what the participants said in the interviews and the names of the participants have also not been disclosed. Rather, pseudo-names have been used to describe the research results and quotations used to substantiate and emphasise certain assertions without ascribing such quotations to specific participants. This allowed the researcher to determine how the various supervisors keep their subordinates accountable for the compliance of wastewater treatment works. Secondary data was collected and used to conduct document analysis in order to triangulate the data collected from research participants.

3.5. Process of analysis

The data collected through semi-structured interviews were analysed using thematic analysis. Thematic analysis has been described as “a qualitative research method for identifying, analysing, organising, describing and reporting themes found within a data set” (Nowell, Norris, White, and Moules, 2017, p. 2). This involves an approach of ordering and synthesizing data by creating categories of themes based on patterns of data. The process is essentially iterative in nature and involves the following steps a). familiarising oneself with data; b). generating initial codes; c). searching for themes; d). reviewing themes; e). defining themes; and f). reporting (Maguire and Delahunt, 2017; Campbell, *et al.*, 2021). A detailed description of the process followed in the reflexive thematic analysis of the data is shown in Table 3.1 below:

Table 3.1 : Phases of Reflexive Thematic Analysis (Campbell, et al., 2021)

Analytic Phase	Description	Actions
Data familiarisation	<ul style="list-style-type: none"> • Immersing oneself in the data to understand depth and breadth of content. • Searching for patterns and meaning begins 	<ul style="list-style-type: none"> • Transcribing audio data • Reading and re-reading data set • Note taking
Initial code generation	<ul style="list-style-type: none"> • Generating of initial codes to organise the data, with full and equal attention given to each data item 	<ul style="list-style-type: none"> • Labelling and organising data items into meaningful groups
Generating initial themes	<ul style="list-style-type: none"> • Sorting of codes into initial themes • Identifying meaning of and relationships between initial codes 	<ul style="list-style-type: none"> • Diagramming or mapping • Writing themes and their defining properties
Theme review	<ul style="list-style-type: none"> • Identifying coherent patterns at the level of the coded data • Reviewing the entire data set as a whole 	<ul style="list-style-type: none"> • Ensuring there is enough data to support a theme. • Collapsing overlapping themes • Re-working and refining codes and themes
Theme defining and naming	<ul style="list-style-type: none"> • Identifying the story of each of the identified themes • Fitting the broader story of the data set to respond to the research questions 	<ul style="list-style-type: none"> • Cycling between the data and the identified themes in order to organise the story.
Report production	<ul style="list-style-type: none"> • Presenting of a concise and interesting account of the story told by the data, both within and across themes 	<ul style="list-style-type: none"> • Writing a compelling argument that addresses the research questions. • Writing beyond the simple description of the themes

The study followed the above-mentioned step-by-step approach to thematic analysis of data which started with multiple reading of the interview transcripts and the researcher discerning the emergence of commonalities and cross-cutting issues raised by various respondents. These common patterns and issues were then classified or categorised into specific themes which were reviewed, refined, and

concretised into specific themes which were finally described to interpret and understand the data (Maguire and Delahunt, 2017; Campbell, *et al.*, 2021). Thematic analysis is also useful in examining not only the common experiences and perspectives of research participants, but also differences and relationships between the experiences and perceptions of participants as well as unanticipated insights emerging from the collected data (Braun and Clarke, 2006; Campbell, *et al.*, 2021).

3.6. Positionality

The researcher has interest in water resources quality and works for an entity of the Department of Water and Sanitation responsible for operational water resources management. One of the functions of the entity is the protection of water resources against sources of pollution. The discharge of wastewater from wastewater treatment works is one of the activities regulated by the entity. The entity therefore has authority over organisations that use water within its jurisdiction to exercise compliance monitoring and enforcement (CME) function. Consequently, there is a perceived power relation between the researcher and the participants which is likely to influence aspects of the study such as data collection and how the data is interpreted.

The researcher is responsible for the monitoring of compliance of sources of pollution such as wastewater treatment works, and this has influenced the choice of the research topic and the target sample. The interpretation of data was affected by the researcher's assumptions, ontological and epistemological orientation towards the study. The researcher's assumptions are that the City of Mbombela Local Municipality officials should be able to plan and implement the mandate of their divisions. Furthermore, they should also achieve the objectives and targets of their divisions and be held accountable to their superiors on the achievements or otherwise of such objectives. The achievements of such objectives should inadvertently include the compliance of WWTWs to formal effluent discharge standards and the conditions of site-specific authorisations.

3.7. Ethics

The research promoted confidentiality, consent, and protection against harm to the research participants. A research protocol was developed by the researcher and submitted to the Wits University Ethics Committee for review and approval in order to protect the research participants and uphold their rights to participate in the research. The ethics clearance certificate is shown in Appendix B of this report. The identity of the research participants was kept anonymous. An agreement to participate in the study was entered with the research participants by way of filling a consent form and their rights to participate or withdraw from the study was explained. The consent form explained the purpose and objectives of the study to ensure informed consent to participate. An example of a consent form is shown in appendix C.

To ensure anonymity, the raw data collected was stored in a password-encrypted computer accessible only to the researcher. Furthermore, the analysis and discussion of the results has also not revealed the identity of the research participants. Rather, pseudo names were assigned to the participants using the following nomenclature Participant MS01; MS02; MS03.

3.8. Validity, reliability, and dependability

The concept of validity in quantitative research is used to define whether the construct used for measurement is accurate and that it measures what it is intended to measure (Golafshani, 2003; Anderson, 2010; Noble and Smith, 2015). In qualitative research, there is a recognition of the existence of multiple truths based on the researcher's personal experience and bias. Validity in qualitative research therefore measures what Noble and Smith (2015) refer to as "truth value" (p. 34) or the accuracy of the research findings. To ensure the validity of the research results, triangulation was utilised by collecting documents for analysis to establish whether the data collected from participants through interviews is corroborated by the data reflected in the documents (Shenton, 2004). The Service Delivery and Budget Implementation Plan (SDBIP) documentation was accessed and used to determine whether it contained information relating to WWTWs compliance with effluent discharge standards as espoused in the Municipal Systems Act (CoGTA, 2000).

Furthermore, member checking was also conducted, and all participants confirmed the accuracy of the transcription of their recorded responses.

“Methodological coherence” (Morse, Barrett, Mayan, Olson, and Spiers, 2002, p. 18) is another important aspect of addressing validity by ensuring congruence or alignment between the problem, purpose, research question, and research methodology. This alignment ensures that the data collected assists the researcher in answering the research question. This study strived for the alignment of the relevant components of the research.

Dependability has also been closely associated with the credibility (Shenton 2004), which has been used interchangeably with validity (Kalu and Bwalya, 2017). To that extent, it is reported that in addressing credibility, one inadvertently assesses dependability since dependability is a subset of credibility (Shenton, 2004).

Although reliability is a concept conventionally used in quantitative research to determine the replicability and repeatability of the research findings, it was later used in qualitative research to determine the trustworthiness of the research findings (Golafshani, 2003). Trustworthiness of the research findings refers to the extent to which the participants’ perspectives are accurately presented. To ensure trustworthiness of the research findings, it is imperative for the researcher to keep “meticulous record demonstrating a clear decision trail and ensuring interpretations of data are consistent and transparent” (Noble and Smith, 2015, p. 35). This includes among other things keeping records of raw data, field notes, audio recordings and verbatim transcription of the participants’ interview recordings prior to coding and analysis (Rowan and Huston, 1997; Nowell et al., 2017). Field notes and audio recording of the interviews were accurately kept in the current study. Furthermore, member checks were conducted by asking the participants “to verify the accuracy of the interview transcript to ensure that the transcript truthfully reflects the meaning and intent of the participants’ contribution” (Johnson, Adkins, and Chauvin, 2020, p. 142).

The next chapter outlines the processes that were followed in the analysis and interpretation of the data collected through semi-structured interviews.

4. CHAPTER FOUR: ANALYSIS AND INTERPRETATION OF DATA

4.1. Introduction

According to Lester, Cho and Lochmiller (2020), determining how to conduct a qualitative analysis is often challenging for many researchers unfamiliar with qualitative research. They assert that the challenge stems from the fact that there is a plethora of approaches that qualitative researchers might leverage, while also adapting to think like a qualitative researcher during the data analysis process. Some of the data analyses methods include framework analysis, content analysis, discourse analysis, thematic analysis, among many others (Lester, Cho and Lochmiller, 2020). The data analysis process followed is described in the next section.

4.2. Data analysis

Although many researchers do not commonly list out a stepwise analytic process (Lester, Cho and Lochmiller, 2020), a phased approach to analytical processes is advised (Lester, Cho and Lochmiller, 2020). Lester, Cho and Lochmiller assert that structuring the data analysis in phases is important in creating “a transparent process for both the qualitative researcher and (ultimately) the reader of a given research report”. They further suggest that these phases are more suited to thematic analysis since they allow the researcher to produce broad descriptive statements reflecting the overall understanding of the data in response to the research questions (Lester, Cho and Lochmiller, 2020). Accordingly, this study followed a thematic analysis of the data in line with the suggestions of Lester, Cho and Lochmiller, 2020 and Campbell, *et al.*, 2021. A detailed thematic analysis process of the data as conducted in this study is shown in table 2 below. The following themes have been identified, and will be used to describe and explain the findings of the study:

Theme 1: Aligning expectations. Defining and assigning roles and responsibilities.

Theme 2: allocation of resources to fulfil the assignment.

Theme 3: mechanisms for accounting and holding subordinates answerable.

Theme 4: support and interventions.

Theme 5: sanctions (corrective action, incentives, and penalties) for decisions and actions (performance).

The research was conducted pursuant to establishing how the internal accountability frameworks for wastewater treatment works are implemented at the City of Mbombela Local Municipality. As indicated earlier, institutional bureaucracies are a “chain of delegations” comprising relationships between those delegating responsibilities and those being delegated such responsibilities. This results in many civil servants becoming both the agent and the principal depending on where they sit in the “chain of delegations”. Each individual civil servant is thus delegated responsibilities by, and accountable to their supervisors through some form of performance management system to monitor their work. According to Brandsma and Schillemans (2012), it is beneficial for the parties (principal and agent) to discuss the preferences of the principal (supervisor) as well as the activities of the agent (subordinate). Ordinarily, this would be informed by the annual performance plan of the division responsible for that particular function. But there should ideally be a performance agreement entered into, between the supervisor and the subordinate to ensure that there is alignment of expectations between the supervisors and subordinates. It was therefore expected that the division responsible for managing wastewater treatment works would have compliance of the effluent discharge from various wastewater treatment works as one of their objectives or targets to achieve. This target would then feature in both the annual performance plan of the division, and the performance agreements of responsible officials. Theme 1 discusses the alignment of expectations between the parties and is discussed below:

Theme 1: Aligning expectations, defining and assigning roles and responsibilities.

The questions about the most important responsibilities and targets as well as who sets them, sought to establish if there was an alignment of expectations between the supervisors and subordinates. The notion of supervisors and subordinates must be understood in the context of hierarchical accountability where civil servants alternate between principal and agent roles depending on the circumstances they find themselves in. Table 4.1 shows a hypothetical organogram where various positions play both principal and agent roles in their organisation structure or “chain of delegation”.

Table 4.1: Hypothetical organisational structure showing principal-agent responsibilities

Designation	Actor Role and Responsibility in administration	
	Principal	Agent
CEO	Yes	No
Executive	Yes	Yes
Manager	Yes	Yes
Assistant Manager	Yes	Yes
Supervisor	Yes	Yes
Officer	No	Yes

Although the CEO is indicated not to play an agent role, they do play the agent role as accounting officer to the board of directors. This hypothetical situation was for illustration purposes only, focussing on administrative work of bureaucracies or agencies of the state.

All participants interviewed identified compliance of wastewater effluent discharges and the maintenance of wastewater treatment works as important responsibilities and targets, and that the effluent discharge was expected to comply with the conditions of site-specific water use license or formal effluent discharge standards set by the Department of Water and Sanitation. Participant MS002 responded by saying:

“Well, the first one is that the quality that we are discharging from the wastewater is compliant. Number 2, it will be to ensure that the equipment in each and every system or each and every wastewater treatment works are well maintained for us to be able to achieve the first goal that I mentioned where we need to be compliant”.

When asked what their most important responsibilities and targets are, and who sets the target, the intention was to establish if these were set by the supervisor as part of the performance agreement so that the performance against the target can then be monitored accordingly. And whether those in higher positions are aware of the requirements to comply to conditions of site-specific water use authorisation or formal effluent discharge standards and whether these are requirements from them of their

subordinates. All participants interviewed showed knowledge of these requirements as shown in the response of participant MS001 where he answered:

“Yes, we do have the discharge quality effluent limits and also on the maintenance part we do have the scheduled maintenance. Whereby we have to know that each and every equipment has to be serviced at a certain interval”.

When participants were asked if compliance to conditions of site specific water use licenses form part of their performance agreements, it became apparent that the City of Mbombela Local Municipality does not have performance agreements. It was curious to find out how the officials get assessed for achievement or otherwise of their targets. The results show that the City of Mbombela Local Municipality neither had annual performance plans for divisions nor performance agreements for individual officials. Participant MS003 gave the following explanation:

“In the city of Mbombela Local Municipality, performance agreement was aligned to section 56 managers. That is your general managers that were appointed by council and also the accounting officer being the city manager.....so at this stage we don't really have an effective performance management system”.

The work of officials is based on job descriptions, work plans and standard working procedures. This was mentioned by participant MS003 saying

“...at this stage it's just job descriptions and they are not translated into performance management system...process controllers must make sure they execute their job descriptions and their work plans.... We also have standard working procedures in the plants. To say when a process controller is coming to work, what is he expected to do, apart from your job description. He comes on a daily basis, He takes the meter readings of the inflow and the outflow during his shift...”

It was further established that the City of Mbombela Local Municipality also does not have annual performance plans for divisions. Instead of annual performance plans, the city had Service Delivery and Budget Implementation Plan (SDBIP), which is a plan for the department, but also serves as a performance agreement for section 56 manager. This was explained by participant MS003 saying

“The only thing that maybe we can use as a performance monitoring tool for us is this thing called SDBIP which is an annual plan but it's being reviewed quarterly.... And that document, remember, is a document that went to council, and council approved it. So, they sort of acknowledge it and it's used as a monitoring tool for the municipality for each general managers' performance”.

It must be explained that the SDBIP is a plan that focuses on development projects where new infrastructure development is planned for and monitored accordingly. The plan does not cover operational matters such as monitoring how well the wastewater treatment works are management, operated and maintained. This was indicated by participant MS003 who stated that:

“That plan is mainly on the projects, where all the projects that will be implemented this year, they will be on that plan and then they will be reporting quarterly. Have they appointed a service provider? How is the service provider performing in terms of financial performance? Are they paying them on time? What are the issues? So little attention is given to operation and maintenance”.

All participants seemed to be very familiar with what is expected of the division and themselves regarding optimal performance of wastewater treatment works with the objective of producing effluent of good quality that complies to the conditions of site-specific water use authorisation. For example, one of the participants indicated that they have an external laboratory that conducts compliance tests for the division and produces monthly results. However, they decried the lack of knowledge and perhaps interest by top management when it comes to ensuring the compliance of wastewater treatment works to formal effluent discharge standards. This opinion links with theme 3 where the supervisors are required to hold their subordinates to account.

The results show that there is no alignment of expectations in the long “chain of delegation” from top management to those who operate the wastewater treatment works. This is evident from the SDBIP, which top management monitors on quarterly basis, invariably focusing on new development projects and not incorporating any operational matters that include the optimal operation of wastewater treatment works and their compliance to relevant standards.

Theme 2: Allocation of resources to fulfil the assignment.

This theme is linked with theme 1 in the sense that when the supervisor delegates responsibility to their subordinates, they also allocate resources to them to create an enabling environment for the achievement of the results. This study identified various requirements for the WWTWs to be operated optimally and to comply to the applicable standards, ranging from functional infrastructure of adequate capacity, availability of monitoring equipment, spare components such as pumps and generators, availability of budgets, analytical laboratory, qualified and trained personnel (process controllers for operation of the WWTWs and a stand-alone team for maintenance), maintenance manual for each plant showing the frequency of maintenance for each component of the plant, etc. This information was mentioned by participants when they were asked what resources they required or provided to their subordinates to ensure the achievement of their targets of effluent compliance with the conditions of site-specific water use authorisation or other applicable standards?

It must be mentioned that the above question did not specifically require the participants to identify which of the required resources were in place. However, some of the resources which were not in place were mentioned in passing by the participants. For example, it was mentioned that some wastewater treatment works do have standby generators while others do not. In addition, labourers were transferred from other divisions to the water and sanitation division to assume work as process controllers, whose work require tertiary qualification in the technical field. It was also implied that the water and sanitation division does not get budget allocation for operation and maintenance activities. This was mentioned in a statement by participant MS003 who mentioned that,

“The only unlocking mechanism is to get capital injection, is to get maintenance budgets, you know. ...the bulk of the operation and maintenance budget was for salaries, overtime, fuel for vehicles and chemicals to use in the wastewater treatment works operation. Nothing really allocated for breakdown and repairs of wastewater treatment works components.

The poor allocation of resources is a source of frustration for participants since they are aware of the impacts of these constrains. For example, one of the participants

mentioned that not having an internal maintenance team affects the effectiveness of the operations since the maintenance team would be able to address minor maintenance problems such as when a pump stops working. Where they would be able to strip and open it and do troubleshooting to check if it did not stop working because of rags which can be removed and get the pump working again. But because of the absence of an internal maintenance team, the municipality is expected to call external service providers to do even minor maintenance work at very high costs. The process of acquiring the services of an external services provider is also slow to acquire and while waiting for these services, effluent of poor quality is being discharged into the water resources since there are no spares or stand-by pumps. This leads to noncompliance and pollution of the water resources. Furthermore, the lack of internal maintenance team makes it difficult for the municipality to conduct preventive maintenance.

The combination of lack of operation and maintenance budget and internal maintenance team makes the work of the participants very difficult and frustrating. To the extent that participant MS003 mentioned that

“...because they don't give us enough funding for those things, that's why we always have a problem. Maintenance is always lagging behind. So, things break up until in the end when nothing is working. And when nothing is working, then we wait for a big project that we don't know when it is going to come, you know”.

Another participant mentioned that the cost of maintenance also escalates when there is a delayed response to repair broken components. The participant gave an example of a sludge pump. That, when it breaks down and is not repaired timely, it corrodes due to exposure to corrosive gases in the wastewater treatment works. When it is later removed for repairs, you would find that the damage has worsened, and the cost escalated. This was mentioned by participant MS001 who said that

“Sometimes you find that you have a breakdown now, but it's only going to be attended after months. And then by then the cost of repairs has already increased because this is a sewer treatment works. So, if a shaft is stuck for now it's going to cease, and the costs of repairs are going to increase because this thing will be standing there and it's going to start corroding through the gases that all our equipment are exposed to. But the sooner we repair the lower will be the costs”.

The results show that the allocation of resources to fulfil the assignment given to those operating and maintaining wastewater treatment works with the objective of complying with applicable standards, is not adequate. The process controllers who operate the wastewater treatment works are not adequately trained, the budget not adequate for repairs of broken components, and there is no internal maintenance team to conduct scheduled and preventive maintenance.

Theme 3: Mechanisms for accounting and holding subordinates answerable.

In a typical bureaucratic environment, which is aligned to vertical accountability, the most common accountability mechanism is the supervisor interaction with the subordinate to conduct a performance review on an agreed frequency. This theme links with themes 1 and 2 in the sense that they allow the supervisors and subordinates to discuss and agree on the expectations of the assignment and the resources required respectively. Theme 3 allows the supervisors to determine how the subordinates have performed, while the subordinates give justification and an account of their performance.

The basis of the assessment is the annual performance plan which is devolved into individual performance agreements showing the contribution of divisional personnel. When participants were asked a series of questions regarding this aspect of the research such as, whether compliance to conditions of authorisation for wastewater treatment works form part of your performance agreement? how do you get assessed on the compliance of wastewater treatment works? what information do you provide as proof of your achievement of targets or compliance to conditions of authorisation for wastewater treatment works? does your supervisor insist on seeing the laboratory results as proof of your achievement of targets?, all participants answered in the negative.

The municipality does not have in place a system to hold subordinates to account for the activities assigned to them. The participants mentioned that they have regular meetings to assess the compliance of WWTWs. And when they assess the results and realise that they have failures, they collectively sit and analyse the results to establish the source of such failures. For example, participant MS001 mentioned that

“For our compliance, we have an external laboratory doing our compliance tests... and then from the monthly results, we look and see what were the failures? When we see that maybe E. coli for example, was a failure then we sit as a section to understand why we had this failure?”

Again, there is a disjoint between top management and the rest of the “chain of delegation”, the operational staff. The operational staff have monthly meetings where they interrogate the failure of the different wastewater treatment works to determine the causes of failure. For example, when Participant MS001 was asked what happens when your supervisor finds that you did not comply to your targets, he responded by saying that when that observation is made,

“...we can have a discussion on what measures do we have to put in place so that we can rectify whatever was wrong ...”

In a follow up question asking what happens when it is found that the failure is as a result of negligence by staff, participant MS002 indicated that

“... in most cases if for instance the targets were not met because of their negligence, then a meeting is scheduled so that they may explain themselves so that we get a better understanding of what actually took place?”

Top management account to the council on the SDBIP which is effectively a project implementation plan that monitors the implementation of new infrastructure projects, while the rest of the chain sits in a divisional meeting to ask themselves what the causes of the failures are which they experienced in a particular month. The operational activities become the responsibility of middle management and the rest of their staff complement and their activities do not feature in the plans of top management. They also don't get asked the relevant questions by top management regarding the compliance of wastewater treatment works. Instead, they volunteer the information to top management as a form of escalating the challenges they are experiencing. These are raised as reports that are not formally documented since they are not quarterly performance reports responding to quarterly reviews of the annual performance plan. One of the participants mentioned that when the matter is raised with the general manager in monthly meeting, the general manager will recommend that they write a motivation, and he would support it. This is reflected in the excerpt below by participant MS003

“So, we'll be raising those problems to him to say, this is what we are faced with and what can we do? And then he will be advising, sometimes he will be saying write a memorandum to the city manager to request funding, I'll sign it...”

Detailed reports of the challenges faced by various wastewater treatment works are provided to top management on monthly basis not because they are requested by top management. They are submitted because of the frustrations faced by operational staff in an attempt to escalate the challenges they are experiencing. It is apparent that it is not top management that is trying to hold the subordinates accountable. In fact, rather than top management asking the questions and prioritising whatever that is identified as requiring urgent and critical repairs, it is external audit findings that compel certain repairs to be prioritised by the municipality. This is evident from the response of participant MS003 reporting that

“... those audit reports, they rank priority to say in this plant, number 1 priority-get your sludge pumps working or get your generator maintained”.

The results show that while the operational staff are frustrated by failure to achieve their objectives, top management is busy implementing new projects and not paying attention to operational activities which include compliance of wastewater treatment works to applicable standards. There is also a realisation that the top management only responds when threatened by legal action from enforcement authorities such as the issuing of directives. The results show that operational activities do not feature in the plans of top management and are also not being monitored on a routine basis by top management. Participant MS003 could not hide the frustration they experience when they raised a strong opinion to say that

“...in my opinion operations and maintenance is not really given serious attention. It is only when we receive directives...and demand the municipality to fix things, and everyone starts to run around”.

While the right questions regarding why certain targets have not been achieved, are asked with respect to new infrastructure development projects listed in the SDBIP and thus demanding accountability, the same can't be said about the operational activities, which do not feature in any plan of the municipality.

Theme 4: Support and interventions

This theme assesses management responsiveness to challenges that are escalated to them for resolution. It links with theme 1 in the sense that when both the subordinate and the supervisor have the same objective, they will both want the challenges experienced to be resolved. It further links with theme 2 because where the challenge is associated with allocation of resources, the relevant resources will then be made available. It also links with theme 3 which creates an accountability platform where the challenges will be raised by the subordinate as justification for the failures to achieve the set targets and objectives.

Top management plays an important role of supporting subordinates to ensure enhanced performance of their teams. Among other things, the support includes resolving challenges escalated by subordinates, which may become impediments towards the attainment of targets and objectives. Resource allocation is the responsibility of top management. Supervisors at middle and lower-level management make requests for budgets and establishment of positions which get approved by top management for implementation. It is therefore imperative for top management to intervene where resource allocation, such as budget, is a factor in the failure to achieve a particular target. This is evident in the comment made by participant MS003 who said that the allocation of resources does not happen at operation and maintenance level.

“...for us to operate and maintain schemes, there's a lot of resources that are required. You need personnel. You need finances. You need planning in terms of future demand, growth or refurbishments that we don't do at operation and maintenance scale, like assets that require lot of capital injection for them to be refurbished. So, for us as operation and maintenance, our role is to identify those critical assets that require replacements or major refurbishments”.

Replacements and refurbishment emanate from breakdowns and worn-out components. Often when these happen, they become emergencies that could be avoided had there been scheduled maintenance, which is preventive in nature. But when there is no preventive maintenance, then critical components breakdown without a warning which results in an emergency. Emergency breakdowns require agile responses which are very rare to find in the municipality. This is shown in the

response of participant MS001 when asked what happens when the type of support and intervention that you need requires budget, they responded by saying,

“...that’s one of the challenges we are facing in the treatment works, especially in the wastewater treatment works, because wastewater is not taken into consideration because now they are prioritising potable water than wastewater.”

When asked what informed their opinion that potable water is prioritised above wastewater, Participant MS001 asserted that there is no pressure from management to comply with effluent discharge standards. They compared the potable water as prioritised above wastewater by giving a scenario of ten chlorine gas cylinders where five each are allocated to wastewater and potable water, and that when two cylinders are left, both will be kept as spares for potable water instead of each receiving one cylinder. This account is reflected in the excerpt below:

“... which plant are you going to take that cylinder to? ... if there are two cylinders, they will say, no we rather keep the other one as a spare again for the potable water than take it to the wastewater or one to wastewater and one to potable water”.

When the researcher realised this notion of potable water being prioritised above wastewater emerging in the account of participant MS001, he included it in the subsequent interviews to get the perspective of other participants. He asked the participants what their experience was with respect to the general believe that potable water was prioritised above wastewater? Both participants MS002 and MS003 responded in the affirmative that it is their opinion as well that potable water is prioritised above wastewater. When asked why they held that opinion, participant MS002 answered,

“The belief is that if you give communities dirty water there will be uprising, there will be strikes and all that. But if you can discharge effluent which actually does not comply, you going to have probably few individuals who actually complain and also it’s going to take a long period of time for them to actually see that actually the water is polluted, the downstream users”.

The account of participant MS002 implies that the municipality responds to those activities that are likely to put pressure on top management rather than choosing to do what is legally correct. It can be inferred that over a period of time, this tendency

developed into a pattern of decisions that invariably favoured potable water over wastewater, creating a perception and lived experiences of participant that potable water is prioritised over wastewater.

The respondents were also asked what their opinion was regarding the general believe that when one is not provided with the required resources, they should not be held to account for not achieving their targets. Participant MS002 responded by saying:

“if you look at a plant like White River where two modules from the six modules have not been working,...If there is a quality failure because of the higher volume of the inflow and the system cannot cope, now we cannot really say the process controller is accountable for that. Because, I believe the MM knows about it, to the general manager knows about it...”

This opinion emphasises the importance of support and intervention by those in control of allocating resources. It can be argued that, even if one is a qualified scientist and is willing to do the work, they would not be able to measure the acidity of the water without an appropriate equipment. Top management support to acquire such an equipment for one is imperative for the attainment of results. The results show that management support is difficult to get in the municipality. Not only is the responsiveness to wastewater activities poor, but it is not given priority. Hence its exclusion from formal municipal plans which get monitored on routine basis.

Theme 5: Sanctions (corrective action, incentives, and penalties) for decisions and actions (performance)

Theme 5 is linked to theme 3 since theme 3 provides the supervisors with a platform to hold the subordinates accountable while the subordinates provide justification for the achievement of targets and objectives. It also links with theme 4 where the supervisors support the subordinates to achieve the targets and objectives. If the targets and objectives are achieved, a positive sanction such as an incentive is issued and a negative one like a penalty or punishment is also issued for not achieving the targets and objectives.

The results show that the absence of annual performance plans and performance agreements make the process of holding subordinates accountable difficult. It seems that once the subordinates justify their reason for not achieving the targets and objective, it ends there. This is premised on the fact that the process of establishing reasons for not achieving targets and objectives is done as a collective in a joint session or meeting. It was however established that there is a way of sanctioning deviant behaviour outside of a formal performance management system. In other words, even without a performance agreement, each officials' responsibilities are still known from job descriptions, work plans and the standard working procedures. The process controllers have to collect readings from measurements of pH, inflow and outflow, chlorine dosing, turbidity and settleable solids. It was established that process controllers also use the Imhof cones to assess the level of suspended solids in the clarifier so that they can de-sludge the clarifier. However, if found that the official failed to perform a particular task, there are sanctions that are instituted against them. This was reported by participant MS003 saying that if a supervisor conducts spot checks and found that the process controller does not de-sludge when required, then they are subjected to a disciplinary procedure. This is shown in the response of participant MS003 saying,

“Supervisor... conduct spot checks and find that, no man, this guy is not de-sludging. Why are you not desludging and there is no reason, he is just sitting somewhere or cooking the whole day...send them for disciplinary hearing, we give them warnings”.

It also became apparent that sometimes noncompliance results from other socio-economic dynamics that ultimately affect the performance of the WWTWs. This was mentioned by participant MS003 who said that

“...people that have tendency after pay days they don't come to work, there is a lot of absenteeism, some process controllers and general workers have got problems of not managing their financial resources, they have problems with loan sharks. They don't come to work. They are hiding somewhere, so it also affects the plants”.

It was further mentioned that when these officials are in hiding, it is necessary that replacements are found to fill in the absent officials' positions which affects other shifts.

The results show that sanctions do get instituted at middle and lower management levels with the supervisors holding subordinates to account for some deviant behaviours affecting the performance of the wastewater treatment works. However, the missing link is the role of top management in ensuring that the targets and objectives of compliance with conditions of site-specific authorisations or formal effluent discharge standards are achieved. Where there is failure to achieve, then sanctions should be instituted. This does not happen because compliance of wastewater discharge effluent is not set as a target by top management. Since it does not get monitored, there are also no sanctions to institute for any failure to achieve it. In fact, the failure to achieve compliance of effluent discharge is not even on the radar of top management.

The next chapter provides the discussion of results as well as describe their significance in relation to the research problem. New insights as well as understandings that emerged from the study are elaborated.

5. CHAPTER FIVE: DISCUSSION OF RESULTS

Municipalities in South Africa are beset with challenges of failing wastewater treatment works with resultant pollution of the water environment. This study sought to explore what challenges if any are experienced by the City of Mbombela Local Municipality with regard to the implementation of accountability mechanisms for wastewater treatment works and whether such challenges contribute towards the poor performance of wastewater treatment works. Where areas of improvement are identified, the study sought to make recommendations for improvement.

The results of the study suggest that hierarchical accountability is not implemented effectively by the City of Mbombela Local Municipality to achieve the objective of ensuring that wastewater treatment works comply to formal effluent discharge standards. The challenges faced by the municipality is that wastewater treatment works are not prioritised by top management and consequently, no accountability information is demanded by them as the principals hierarchically. Because there is no demand for accountability from the principal, the agent(s) or middle and lower-level management do attempt to provide the information, but the information is not structured. The function of managing wastewater treatment works is not covered in the annual performance plan of the municipality, the SDBIP. It is therefore assumed that there is no formal annual performance plan for wastewater treatment works and associated personal performance agreements for individual officials. There are no maintenance plans to determine the frequency of conducting scheduled maintenance, which prevents breakdown of components.

The provision of accountability information is not in accordance with the generally agreed concept of accountability as an obligation of the agent to provide the information to the principal as espoused in the principal-agent theory. Rather, the results show that the accountability information is provided voluntarily since it is not demanded. This practice is consistent with the concept of voluntary accountability espoused by de Boer (2023). However, since there is neither an annual performance plan nor a personal performance agreement, there are thus no agreed or shared understanding of what information is to be provided to the principal. This is consistent

with the finding by Jibat, Senbeta, Zeleke and Hagos (2024) who found that due to norms and standards (detailed standards, guidelines and manuals) not being in place to prevent pollution of water resource by wastewater discharge, the implementation of accountability was sub-optimal. It was further found that the roles and responsibility were not spelt out. This resulted in the pollution of water resources due to ineffective implementation of accountability mechanisms. The absence of annual performance plans and performance agreements which were expected to provide the performance measurements, are tantamount to the “*about what is the accountability to be rendered?*” aspect (Bovens, 2007) which is critical in the alignment of expectations between the agent and the principal.

It is likely that the information provided is probably not structured and based on the frustration experienced by the middle and lower-level management the information provided does not even contain compliance monitoring data. The information is probably comprised only of reports on breakdown of components with the intention of soliciting funding as a form of intervention. This is because the middle and lower-level management staff are not only frustrated by the poor support they receive from top management, but lack of responsiveness and knowledge about wastewater treatment works. They also lamented the fact that top management does not even know the location of their wastewater treatment works and also have no knowledge of what the green drop certification program is about.

Ideally, the accounting officer and his top management are responsible for all the legal mandates of the institution including operational activities. It was therefore expected that the top management at the City of Mbombela Local Municipality would show not just interest but ownership of the responsibility for ensuring that wastewater treatment works comply with formal effluent discharge standards. This study has shown that top management, as the principal, do not align their preference or interest with that of their agent represented by the water and sanitation division which is responsible for managing wastewater treatment works. This finding is akin to the phenomenon described by (Han, 2019) as “*drifting principals*”. The “annual performance plan” of the municipality, the SDBIP, is skewed towards the implementation of new infrastructure projects and is therefore, effectively a project management plan. The plan excludes operational activities or functions which encompass the operation and maintenance of wastewater treatment works.

Consequently, the compliance of wastewater treatment works to formal effluent discharge standards, do not get monitored on a routine basis to establish how WWTWs are performing. Because WWTWs compliance is not being monitored, it is also not being accounted for in a formal manner. The principal is effectively disengaged in what is referred to by accountability scholars as “drifting principals”, where principals fail to hold their agents accountable to the assignment given to them (Han, 2019). As a result of the agents not being held accountable, there are no sanctions for not achieving the target of WWTWs compliance with formal effluent discharge standards. Voluntary accountability by middle and lower-level management to top management is consistent with the assertion by scholars that voluntary accountability is a response to accountability gaps (de Boer, 2023). The study has therefore established that there are no formal accountability mechanisms for wastewater treatment works at the City of Mbombela Local Municipality.

Contrary to the assumptions of the principal-agent theory that accountability failure occurs as a result of “drifting agents”, where the agents maximise their own utility, accountability failure in the case of the City of Mbombela Local Municipality occurred as a result of “drifting principals”. This study sought to investigate how vertical (hierarchical) accountability frameworks for wastewater treatment works are implemented at the City of Mbombela Local Municipality. The findings of the study showed that there are no formal accountability mechanisms for wastewater treatment works at the City of Mbombela Local Municipality.

The five themes that were developed through thematic data analysis resulted in the conceptual hierarchical accountability mechanism presented in Figure 5.1 below. The model is based on the fact that compliance of effluent discharge to formal effluent discharge standards is a measure or indicator of performance and can therefore be used to implement accountability through the performance management system.

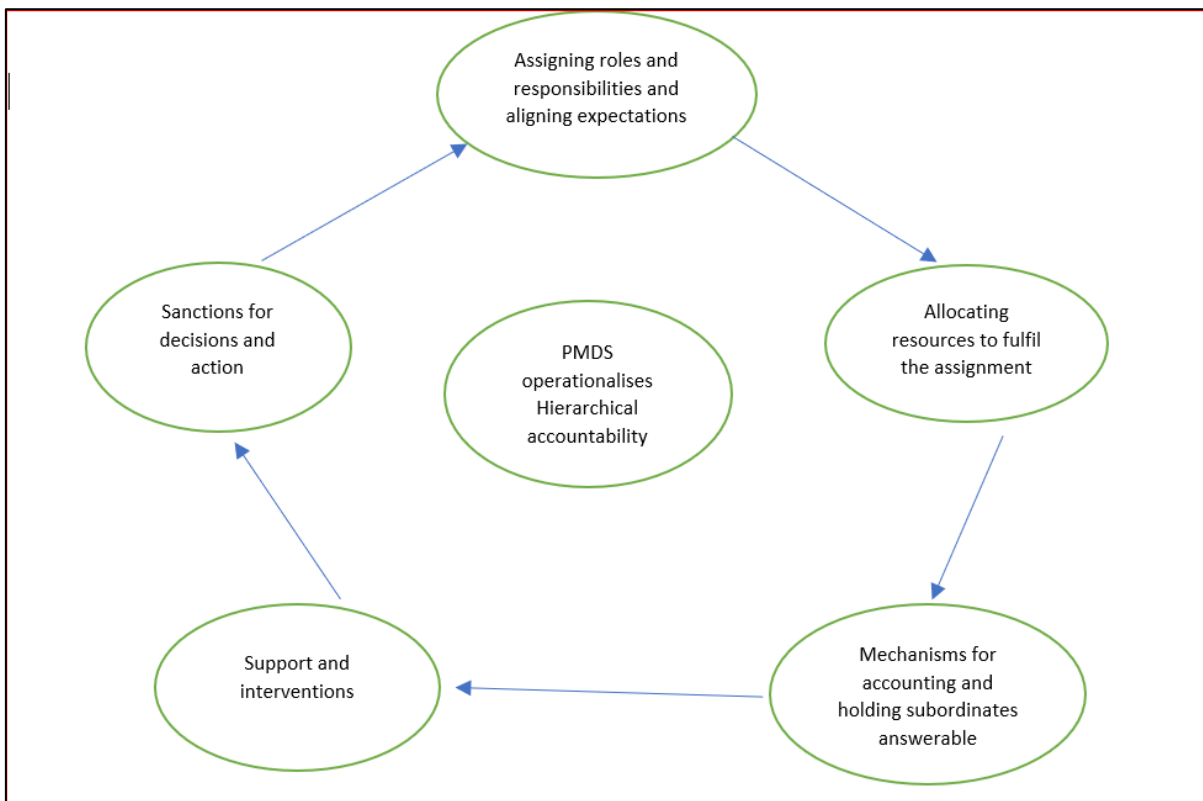


Figure 5.1: Conceptual hierarchical accountability mechanisms for wastewater treatment works (Source: Researcher’s compilation)

Alignment of interest between the principal and agent is the first step in accountability. This supports Overman and Schillemans’ (2021) notion of felt accountability which denotes an impression by an agent that they will be held accountable for their actions or performance. This engagement of aligning expectations is deemed to be very important in minimising conflict of interest (Ebrahim, 2003) and clarifying who is accountable, to whom are they accountable and for what are they accountable (Overman and Schillemans, 2021). Allocation of resources is an aspect of performance management and development system which has been infused into this accountability mechanism as an enabling factor, and it forms the second step of the model.

The third step is mechanisms holding agent accountable which entails the type of information that will be assessed and the frequency of assessment. In the current study, it was expected that the results of effluent discharge quality and the applicable effluent discharge standards such as conditions of site-specific water use authorisations will be used to assess compliance of effluent discharge. However, this

was not the case. I found that only middle to lower-level management held collective sessions to assess why certain failure of compliance occurred. The fourth step is support and intervention which allows the principal to provide support when the agent experiences some challenges. This is dependent on the two parties sharing the same interest as stipulated in the first step. The last and fifth step is sanctions which allows the principal to institute penalties for failure or incentive for achievement of targets.

The absence of accountability mechanisms for WWTWs predisposes the municipality to suboptimal delivery of service. While the municipality collects wastewater from residential areas, the treatment and disposal of such waste is not compliant with applicable standards. This leads to pollution of water resources with potential negative impacts to downstream users such as industries, irrigation farmers and neighbouring countries. Irrigating with polluted water could cause health impacts and outbreak of disease as well as trigger litigation against the municipality. Continuing to operate WWTWs without accountability mechanisms in place is tantamount to driving a vehicle at night without headlights. The accounting officer and top management of the municipality has no idea what the compliance status of their WWTWs is, thus making it difficult if not impossible to take corrective measures when necessary.

The findings of this study are significant as they illuminate the shortcomings in the responsibility, answerability and enforceability aspects of accountability mechanisms for WWTWs within the municipality. As the adage goes, *“if you can’t measure it, you can’t manage it”*. The municipality is failing to optimally manage WWTWs because they do not have mechanisms in place to measure their performance and compliance to applicable standards. In other words, the municipality is not complying to the requirements of their regulator on the one hand, while on the other hand polluting water resources and making them unfit for use by other water users. This is corroborated by Widaninggar, Sukoharsono, Purwanti, and Prihatiningtias (2024) who emphasised the importance of measuring performance to improve efficiency and effectiveness in government agencies as a critical assessment aspect of accountability.

6. CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

Overall, this study has revealed the absence of accountability arrangements for the management of wastewater treatment works at the City of Mbombela Local Municipality. The absence of these accountability mechanisms is a source of huge frustration for middle and lower-level management who are eager to perform their jobs and achieve their targets. Some ad hoc arrangements have been put in place in an attempt to address emerging challenges such as meetings among middle and lower-level management officials to establish sources of failure based on observations from non-compliant data. However, these arrangements are obviously not bearing any positive results. Where formal accountability mechanisms are put in place, officials are held to account and have to justify their conduct or performance. Furthermore, where they fail to achieve their targets, the superior (principal) should judge the conduct of their subordinate (agent) and implement sanctions in the form of corrective action, penalty or incentive. This process is patently lacking when it comes to the management of WWTWs at the City of Mbombela Local Municipality. While other factors such as low budget allocation, recruitment of unqualified personnel, and the lack of routine maintenance among other factors have been known to contribute towards the failure of municipal WWTWs, the results of this study have provided some insight towards broader understanding of the absence of accountability mechanisms as another contributing factor towards the failure of municipal WWTWs.

Due to the small sample size that was utilised in the study, the results are therefore not generalisable. Generalisability refers to the case-to-case transferability of research findings (Nowell *et al.*, 2017). While the study provides thick descriptions as well as deep and nuanced understanding of the phenomenon being studied, the challenges at each municipality are dynamic and grossly varied. Furthermore, a municipal water services function could be characterised as a complex system that comprise many moving parts, and this complexity makes it difficult for the study outcomes to be transferrable. At the very least, the findings could inform practice and offer insights about practices in a given context in the water services sector regarding how accountability mechanisms could be implemented.

The availability of the relevant research participants and access to secondary data was a challenge. Having access to all relevant participants would have aided the data collection to reach saturation and thus close all the possible gaps that could result from not interviewing some of the role players responsible for this function. Access to secondary data would have assisted the researcher to determine whether WWTWs compliance gets reported at other accounting platforms and how the accounting information is collected.

The data collection for one participant was done through virtual platform (Microsoft Teams) with the camera switched off. This data collection process was not able to capture the body language of the research participants, which limited the nuances that enrich the thick descriptions associated with qualitative research. The scope of this study did not cover accountability of top management (section 56 managers) to the municipal council on wastewater treatment works. Further, it covered only one municipality out of many.

For the municipality to improve the implementation of its accountability mechanisms, it is recommended that they develop an annual performance plan (APP) for operational functions which include the performance or compliance of WWTWs, with clear targets and measurable indicators. The officials responsible for the management of WWTWs hierarchically from the process controllers up to the municipal manager should then develop performance agreements aligned with the APP targets. Regular (e.g. quarterly) performance reviews must be conducted between each official and their supervisor where the targets in both the APP and the performance agreements become the subject of performance assessments, and thus the basis of accountability between the subordinate and the supervisor. In this manner, the challenges experienced by the process controllers would be accordingly reported throughout the hierarchy as obstacles towards achievement of the targets and appropriate interventions implemented to address such challenges.

It would be curious to find out through future studies as to why the City of Mbombela Local Municipality prioritised new infrastructure project implementation over operation and maintenance of existing infrastructure. Secondly, it would also assist to establish how widespread the absence of accountability mechanisms is in the wastewater management space. Another recommendation for future research is to assess the

concept of accountability as the logic of appropriateness to determine to what extent top management considers the legality to comply with formal effluent discharge standards important. Lastly, it is further recommended that a follow up study be conducted to compare accountability mechanisms for wastewater treatment works managed by municipalities against those managed by independent water service providers. Future research may focus on one of the municipalities whose wastewater treatment works perform well in the green drop score/certification to establish what it is that they are doing differently in the accountability space. The current study assessed the concept of accountability as the “logic of consequence” and has demonstrated that it has no effect on the conduct of top management, except when there are potential legal implications such as when directives are issued against the municipality.

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8. APPENDICES

Appendix A: Interview Guides

Superintendents

1. Why don't we start by you telling me about yourself? What are your qualifications and how long have you worked in your current position?
2. What would you say are two of your most important responsibilities/targets/objectives regarding the operation and maintenance of WWTWs?
3. Where do these targets/objectives come from and who sets them?
4. Does compliance to conditions of authorisation for WWTWs form part of your performance agreement?
5. So how do you get assessed on the compliance of WWTWs?
6. What information do you provide as proof of your achievement of targets or compliance to conditions of authorisation for WWTWs?
7. Does your supervisor insist on seeing the laboratory results as proof of your achievement of targets?
8. What happens if you do not achieve compliance?
9. If you do not achieve your targets, are you given an opportunity to provide reasons why you did not achieve them?
10. What happens to the issues that you raise as reasons/obstacles towards your achievement of targets?
11. Some people believe that if one was not provided with resources, tools and equipment to perform one's work, one should not be held to account for the non-achievement of targets. What is your view on this?
12. In your opinion, what do you think are the good things you are doing at the City of Mbombela which municipalities and other water service providers can learn from you?
13. What do you think are the areas that need improvement in what you do?

Supervisor 1

1. Why don't we start by you telling me about yourself? What are your qualifications and how long have you worked in your current position?

2. What would you say are two of your most important responsibilities/targets/objectives regarding the operation and maintenance of WWTWs?
3. Where do these targets/objectives come from and who sets them?
4. Does compliance to conditions of authorisation for WWTWs form part of your performance agreement?
5. What resources, tools and equipment do you provide to your subordinates to ensure that they perform optimally and thus achieve the targets that you set and agree with them?
6. As a manager, what information do you require from your subordinates as proof that they are operating and maintaining the WWTWs as required?
7. If your subordinates do not achieve the targets agreed between you and them, do you give them an opportunity to provide reasons why they did not achieve them?
8. What happens to the issues that they raise as reasons/obstacles towards their achievement of targets?
9. You also report to the General manager. So, what information does he require from you to prove that you are achieving the targets set for the WWTWs?
10. If you do not achieve the targets agreed between you and the GM, are you given an opportunity to provide reasons why you did not achieve them?
11. What happens to the issues that you raise as reasons/obstacles towards your achievement of targets?
12. Some people believe that if one was not provided with resources, tools and equipment to perform one's work, one should not be held to account for the non-achievement of targets. What is your view on this?
13. It is generally believed that municipalities prioritise potable water over wastewater treatment works. What is your experience here at Mbombela?
14. In your opinion, what do you think are the good things you are doing at the City of Mbombela which municipalities and other water service providers can learn from you?
15. What do you think are the areas that need improvement in what you do?
16. In what report(s) does the performance of WWTWs get recorded and where (what structure) does it get reported?
17. What is your perception about the role or impact of the Green Drop certification program on the performance of WWTWs?

18. Could you please provide me a copy of your Performance Agreement and Performance Reviews for the 2021/2022 Performance Cycle?

Supervisor 2

1. Why don't we start by you telling me about yourself? What are your qualifications and how long have you worked in your current position?
2. What would you say is the most important responsibility/target/objective regarding the operation and maintenance of WWTWs?
3. Please tell me who sets the targets/objectives for the operation and maintenance of WWTWs?
4. As someone that reports to the MM, could you please tell me about the MM's expectation from you regarding the compliance of WWTWs to conditions of authorisation
 - a. Does his expectation include compliance to conditions of the license?
 - b. Does compliance to licence conditions form part of your performance agreement?
 - c. How does that translate to your expectation of your team who operate and maintain WWTWs?
5. What resources, tools and equipment do you provide to your subordinates to ensure that they perform optimally and achieve the targets that you set and agree with them?
6. As a manager, what information do you require from your subordinates as proof that they are operating and maintaining the WWTWs as required?
7. If your subordinates do not achieve the targets agreed between you and them, do you give them an opportunity to provide reasons why they did not achieve them?
8. Please explain what happens to the issues that they raise as reasons/obstacles that cause them not to achieve their targets?
9. You report to the city manager. So, what information does he require from you to prove that you are achieving the targets set for the WWTWs?
10. If you do not achieve the targets agreed between you and the MM, are you given an opportunity to provide reasons why you did not achieve them?
11. What happens to the issues that you raise as reasons/obstacles towards your achievement of targets?

12. Some people believe that if one was not provided with resources, tools and equipment to perform one's work, one should not be held to account for the non-achievement of targets. What is your view on this?
13. It is generally believed that municipalities prioritise potable water over wastewater treatment works. What is your experience here at Mbombela?
14. In your opinion, what do you think are the good things you are doing at the City of Mbombela which municipalities and other water service providers can learn from you?
15. What do you think are the areas that need improvement in what you do?
16. In what report(s) does the performance of WWTWs get recorded and where (what structure) does it get reported?
17. What is your perception about the role or impact of the Green Drop certification program on the performance of WWTWs?
18. Could you please provide me a copy of your Performance Agreement and Performance Reviews for the 2021/2022 Performance Cycle?

Appendix B: Certificate of competence in research ethics

CERTIFICATE OF COMPETENCE IN RESEARCH ETHICS

Name: Mamaropeng M Selepe
Student/Staff No: 747965

Date of Certification: 23 February 2022 - 22 February 2025 (This certificate is valid for a period of three years)

TRAINED BY:
PROFESSOR JASPER KNIGHT
(RESEARCH ETHICS)

SIGNATURE


ISSUED BY:
DR ROBIN DRENNAN
(DIRECTOR: RESEARCH OFFICE)

SIGNATURE



UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

This certificate is confirmation of successful completion of a training course in Research Ethics for Non-Medical human research, based upon achieving a minimum level of competence in different assessment tasks.

Appendix C: Consent form



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JOHANNESBURG

Consent Form

Title of project: The exploration of accountability frameworks for sewage works management in City of Mbombela Local Municipality:

Name of researcher: Mamaropeng Marcus Selepe

I,, agree to participate in this research project.
The research has been explained to me and I understand what my participation will involve. I agree to the following:

(Please circle the relevant options below).

I agree that my participation will remain anonymous	YES	NO
---	-----	----

I agree that the researcher may use anonymous quotes in his / her research report	YES	NO
---	-----	----

I agree that the interview may be audio recorded	YES	NO
--	-----	----

I agree that the information I provide YES NO
may be used anonymously for this
project only and will be deleted after the
project has ended.

..... (signature)

..... (name of participant)

..... (date)

..... (signature)

..... (name of person seeking consent)

..... (date)

Appendix D: Permission to conduct research at the City of Mbombela Local Municipality

Civic Centre
1 Nel Street
Mbombela 1201
Republic of South Africa



P O Box 45
Mbombela 1200
Republic of South Africa
Tel: +27 (0) 13 759-9111
Fax: +27 (0) 13 759-2070

OFFICE OF THE CITY MANAGER

Tel: 013 759 2041
Enq: Ms. Busi Sithole

11 January 2023

University of Witwatersrand
Private Bag 3
Johannesburg
Wits 2050
South Africa

Attention: Mr. Mamaropeng Marcus Selepe

Dear Sir,

RE: PERMISSION TO CONDUCT RESEARCH AT THE CITY OF MBOMBELA.

Your letter dated 24 October 2022 on the abovementioned subject has reference.

The City of Mbombela hereby grants you permission to conduct a research study entitled: ***"The exploration of accountability frameworks for sewage works performance in the City of Mbombela."***

Please take note that the municipality will not be liable for any financial responsibility on this study. Kindly ensure that the work of employees is not interrupted and consent is obtained from each participant before the actual research is conducted.

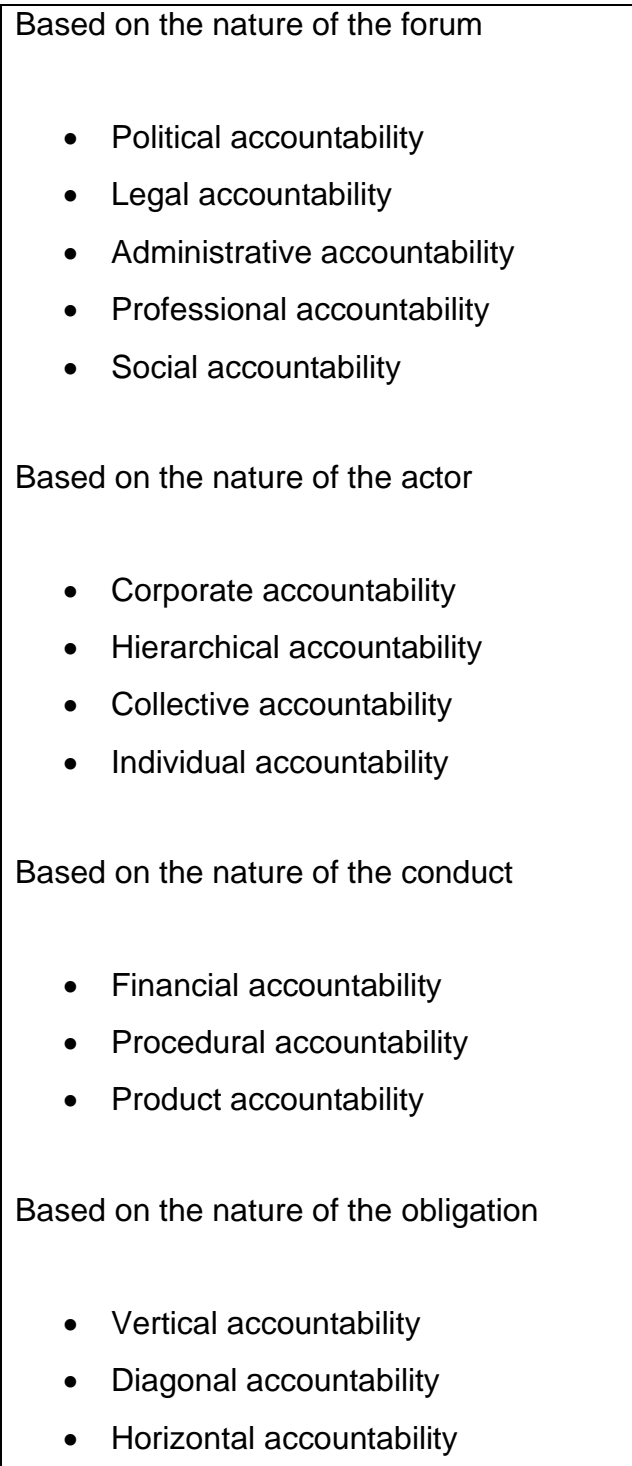
We wish you all the best with your research and would appreciate if you share with us the research outcomes and recommendations.

Regards,

W.J. KHUMALO
CITY MANAGER

Appendix E: Schematic showing the types of accountability

Types of Accountability



(Adopted from Bovens, 2007)

Appendix F: Thematic Data Analysis Process

Statements of analytical importance from research transcripts	Initial codes	Initial themes	Reviewed theme	Defined themes with names
<ul style="list-style-type: none"> • Effluent quality • Discharge effluent standards • Scheduled maintenance • Water use license conditions for effluent discharge • Effluent discharge quality is compliant • Compliance to WUL and green drop 	Effluent quality	Compliance to set standards	Aligning expectations, and defining and assigning roles and responsibilities	Aligning expectations, and defining and assigning roles and responsibilities
<ul style="list-style-type: none"> • No knowledge of green drop by top management • No established submissions to CoGTA in terms of the municipal systems act 	Same objectives			
<ul style="list-style-type: none"> • Machinery of the system is operational 	Maintenance of WWTWs			

<ul style="list-style-type: none"> • WWTWs is well maintained • Maintenance manual for WWTWs • Overall operation of WWTWs • operational standards 				
<ul style="list-style-type: none"> • Resources required such as personnel, finances, planning for future demand growth, refurbishments, identification of critical components that require replacements • Resources and support provided to achieve the targets and objectives • Standby components such as sludge pumps must always be available. 	Asset management	Capacitated Process controllers	Creating enabling conditions	Allocation of resources required to fulfil the assignment
<ul style="list-style-type: none"> • External laboratory in place • No internal maintenance team • Dependent on external service providers. 	Request for external capacity			

<ul style="list-style-type: none"> • We trained process controllers through TVET colleges and LGSETA learnerships and they got accredited. • Process controllers were also registered with DWS and got classified accordingly. • Proper process controllers that are trained 	<p>Training and classification of process controllers</p>			
<ul style="list-style-type: none"> • Things break until there is nothing is working, due to lack of maintenance • Wait for big refurbishment projects • Budget constraints make it difficult to achieve the goal of complying to effluent discharge standards • Cost of repairs escalate with delayed response by top management 	<p>Resource allocation affects responsiveness to reported incidences</p>	<p>Delays have knock-on effects on performance and costs</p>		

<ul style="list-style-type: none"> Leads to absence of preventive maintenance 				
<ul style="list-style-type: none"> No annual performance plan to monitor operational performance SDBIP linked to the performance of the section 56 managers Only focuses on projects (project implementation plan) Reporting of incidents (breakdown of components) 	<p>Divisional performance appraisal</p>	<p>Reporting requirements</p>	<p>Monthly, quarterly and annual performance reviews</p>	<p>Mechanisms for accounting and holding subordinates answerable</p>
<ul style="list-style-type: none"> No formal performance agreements Dependent on the job description and employment contract for stipulation of their duties Monthly meetings to discuss reports for all WWTWs in detail, 	<p>Personal performance appraisal</p>			

<p>operational challenges, where we can improve</p> <ul style="list-style-type: none"> • Meetings also scheduled with process controllers so that they can explain non-conformance due to negligence 				
<ul style="list-style-type: none"> • Dependent on auditors auditing the WWTWs and producing reports that indicate priority for each WWTWs • 	<p>Performance driven by audit findings</p>			
<ul style="list-style-type: none"> • Intervention imperative where budget is a factor for improvement to occur • Delayed or poor response from top management • Sometimes support not forthcoming • Turn around times regarding broken components not in place 	<p>Poor management support</p>	<p>Responsiveness</p>	<p>Support and intervention</p>	<p>Support and interventions</p>

<ul style="list-style-type: none"> • Unlike potable water, where priority is given, WWTWs not given priority by top management • No pressure to comply • Joint project planning between Operation and maintenance team and the planning department not coordinated by the section 56 manager 				
<ul style="list-style-type: none"> • Improved response occasioned by directives or possible legal action by downstream users • Pollution affects downstream users • Impact is indirect 	Lack of sensitivity to the impact of pollution			
<ul style="list-style-type: none"> • Officials must be held accountable for things they are in control of • Inadequate attention given to operational matters. 	The principal not playing the roles they must play (drifting principal)	Disengaged management	Consequence management	Sanctions (corrective action, incentives and penalties) for decisions and action (performance)

<ul style="list-style-type: none"> Operational matters not covered in the SDBIP Roles and responsibilities of top management not formalised No formal procedure to monitor or hold officials to account since there is no APP, and no performance agreements. 				
<ul style="list-style-type: none"> Sanctions for officials not doing their job Officials raise challenges and provide options for corrective action to be taken to improve the situation Officials provide information voluntarily 	Find your way			
<ul style="list-style-type: none"> 				

Adapted from Lester, Cho and Lochmiller, 2020 and Campbell, *et al.*, 2021)