MSUNDUZI MUNICIPALITY SUSTAINABLE DEVELOPMENT GOALS (SDG)

Voluntary Local Review (VLR) Report 2025/27

OPENING STATEMENT

"By 2040 Msunduzi will be a safe, vibrant, sustainable and smart metropolis."

Msunduzi Local Municipality IDP vision

The Msunduzi Municipality framing of the strategic vision within the policy framework seeks to facilitate and achieve vibrant, sustainable and smart spaces for communities. The vision requires a collective approach towards tackling the persistent and dreaded challenges brought by escalating unemployment, poverty and inequality. To accelerate the achievement of these strategic, transformative and inclusive objectives, the municipality has embarked on the radical and sustained approach towards service delivery across all communities.

While alleviating the myriad challenges which the municipality has identified, it is incumbent to the political and administrative leadership to succinctly align the broader national and regional strategic objectives to ensure uniformity across government programs and resource allocation. Furthermore, the municipality has endeavored to position itself amongst global leaders in public governance through the adoption of service delivery standards and policy framework that complies and aligns with global norms and standards.

The municipality views the production of the Voluntary Local Review (VLR) as essential and critical to the overall process of monitoring and evaluation of the level and quality of service provision. It further recognizes the vital role VLRs perform in tracking and locating resource expenditure and policy positions within the local government sphere. The review process highlighted the critical element that allows for internal examination of policy performance and awareness to local government leaders.

The success of the review process was influenced by diverse stakeholders that contributed to the production of the document through the provision of critical information and insights into different dimensions of municipal service provision. The validation of the information relied heavily on the participation of civil society, sector departments and communities.

The continuous annual review of the VLR has the potential to significantly impact positively the planning and implementation of service delivery programmes and projects. The desire to improve our communities' socio-economic outlook must be faced with urgency and must be anchored by a robust monitoring and review system that is credible and accessible to all local government stakeholders. VRLs have the capacity to supplement and improve the approaches of local government towards service delivery.

"By 2040 Msunduzi will be a safe, vibrant, sustainable and smart metropolis."

Contents

1. Introduction to the Sustainable Development Goals 6
1.1 SDG Reporting using Voluntary Local Reviews 7
2. Methodology and process for review process 8
2.1 SGD selection process 8
Stakeholder engagement and data collection approach 8
3. Msunduzi Municipality Context 10
3.1 Pietermaritzburg City 12
3.2 Municipal developmental vision 13
3.3 Demographics 14
3.4 Municipal physical characteristics 15
3.5 Key strategic challenges 16
3.6 Key City Development Strategies 16
4. Strategic framework and Policy alignment 18
5. SDG and indicators monitoring and reporting 1
5.1 Target: 6.1 2
5.1.1 Households with access to clean and safe water 3
5.1.2 Strategic alignment of Target 6.1 4
5.1.3 Reliability 7
5.1.4 Opportunities and impediments to reliable water provision 7
5.2 Target 2 8
5.2.1 Safely Managed Sanitation Services in Msunduzi Municipality 9
5.2.2 Wastewater Treatment Infrastructure 9
5.2.3 Monitoring of water quality 13
5.2.4 Challenges of achieving SDG 6.2.1b 13
5.3 Target 3 15
5.3.1 Domestic and Industrial Wastewater Flow Safely Treated in Msunduzi Municipality 15
5.3.2 Good ambient Water Quality in Msunduzi Municipality (SDG 6.3.2) 15

5.3.3 Challenges Affecting Ambient Water Quality 16
5.4 Target 4 16
5.4.1 Regional water source 16
5.4.2 Change in Water-Use Efficiency Over Time 17
5.4.3 Measures to Improve Water-Use Efficiency 17
5.4.4 Challenges of a sustainable water resource management 18
6. Best practice projects 19
7. Threats to a sustainable water resource management ..**Error! Bookmark not defined.**
8. Recommendations 22
9. Conclusion 23
10. Reference 24

By 2030 Msunduzi Will Be a Safe, Vibrant, Sustainable and Smart Inner Capital

1. Introduction to the Sustainable Development Goals

The SDGs are a universal call to action for all countries (developed and developing), and middle-income to promote sustainable development across social, economic, and environmental dimensions. They are formed from previous global initiatives, including Agenda 21 (1992) and the Millennium Development Goals (2000), and aim to address interconnected challenges such as poverty, inequality, climate change, and environmental degradation.

The premise of the programme emanated from the 2030 Agenda which South Africa is a signatory member state. The 2030 Agenda set out the core principles of universality, leaving no one behind, interconnection and indivisibility, inclusiveness and multi-stakeholder partnerships. The core principles are further encapsulated in the 17 Sustainable Development Goals and the corresponding 169 accompanying targets. The achievement of these goals increases the potential to actualize sustainable human settlements, quality governance, financial stability, and sustained economic growth and social development.

Figure 1: Sustainable Development Goals

The lack of proper sanitation along with inconsistent water supply obstructs development and results in numerous fatalities, particularly among individuals residing in informal settlements, frequently known as "slums" in urban regions. These difficulties are expected to

intensify in the future because of an increasingly large city population requiring access to already insufficient and frequently poorly managed resources. Insufficient access to water in densely populated urban regions significantly exacerbates local pollution issues. Current urban water distribution and sanitation systems are frequently deteriorating and struggle to handle the increasing urban growth, which makes it difficult to predict demand and manage newly constructed systems. Often failing to provide inclusivity and resilience, leaving the urban poor without access to these essential services.

1.1 SDG Reporting using Voluntary Local Reviews

The VLR process is an instrumental mechanism towards comprehending the service delivery standards. An alternative measure towards local government monitoring and evaluation necessary to supplement existing mechanisms. It further presents an opportune approach towards improving the Localisation of SDGs.

The Sustainable Development Goals Country Report 2023 of South Africa acknowledges the challenge the country has experienced since 2019 including systemic socio-economic and environmental issues like prevailing and increasing poverty, rising levels of unemployment, increasing inequality, droughts and flooding, most of which are exacerbated in times of crisis. These have impacted the implementation of the SDGs, with cross cutting developmental issues including high levels of poverty, inequality and unemployment continue to undermine the progress made.

The report further notes that water and sanitation access remains a national challenge, exacerbated by impact of climate change on water resources, with prolonged droughts and flooding, and destroyed infrastructure. While funding and investment in water and sanitation infrastructure has re-enforced some of the limitation experienced.

There are immense benefits which the municipality can leverage that are associated with undertaking the VLR process includes;

- International recognition through partnership with SALGA and UN
- Attraction of International donors
- Evaluation and monitoring of municipal development standards
- Public awareness of municipal service delivery outcomes
- Improve the image of the municipality
- Alignment of municipal priorities with national & global development framework
- Participation in peer learning and knowledge sharing

2. Methodology and process for review process

2.1 SGD selection process

The selection of **SDG 6** was undertaken through a rigorous process coordinated by the Project Steering Committee which included the programme champions and the key municipal units. The decision process that resulted in the focus of SDG 6 emanating out of the critical nature of water and sanitation provision and the impact it has in the facilitation of sustainable and resilience of human settlements.

Stakeholder engagement and data collection approach

The drafting of the VLR was supplemented by an extensive undertaking of stakeholder engagements to gather and collage relevant data on water and sanitation provision, limitations, opportunities and initiatives.

Stakeholder	Date of engagement
VLR Steering Committee	18 March 2026
IDP stakeholder engagement	06 March 2026
Council resolution	25 February 2026
Social media posts	06 May 2026
Municipal website upload	June 2026

Image 1: IDP engagement

Data measurement and standardisation

The data outlined within the report was extracted from official municipal reports, policies and official government records. The strict control of data presented was to ensure credibility of the information analysis and the results generated. The interpretation of the data acquired relied heavily on the experiences outlined by the stakeholders involved in the process.

3. Msunduzi Municipality Context

The Msunduzi Municipality is located within the uMgungundlovu District Municipality and lies approximately 85 km west of the Durban Port. The city of Pietermaritzburg, situated in the Msunduzi Municipality, is the second-largest city in the KwaZulu-Natal province and the fifth-largest city in South Africa. It is the capital of KwaZulu-Natal, and the main economic hub in the uMgungundlovu District Municipality and the Midlands. The N3 national highway (corridor) and the R56 provincial arterial route run through the municipality in an east-west and a north-south direction respectively.

The municipality shares boundaries with the Mkhambathini Municipality to the east, Richmond Municipality to the south, Impendle Municipality to the south-west, uMngeni Municipality to the west, and uMshwathi Municipality to the north.

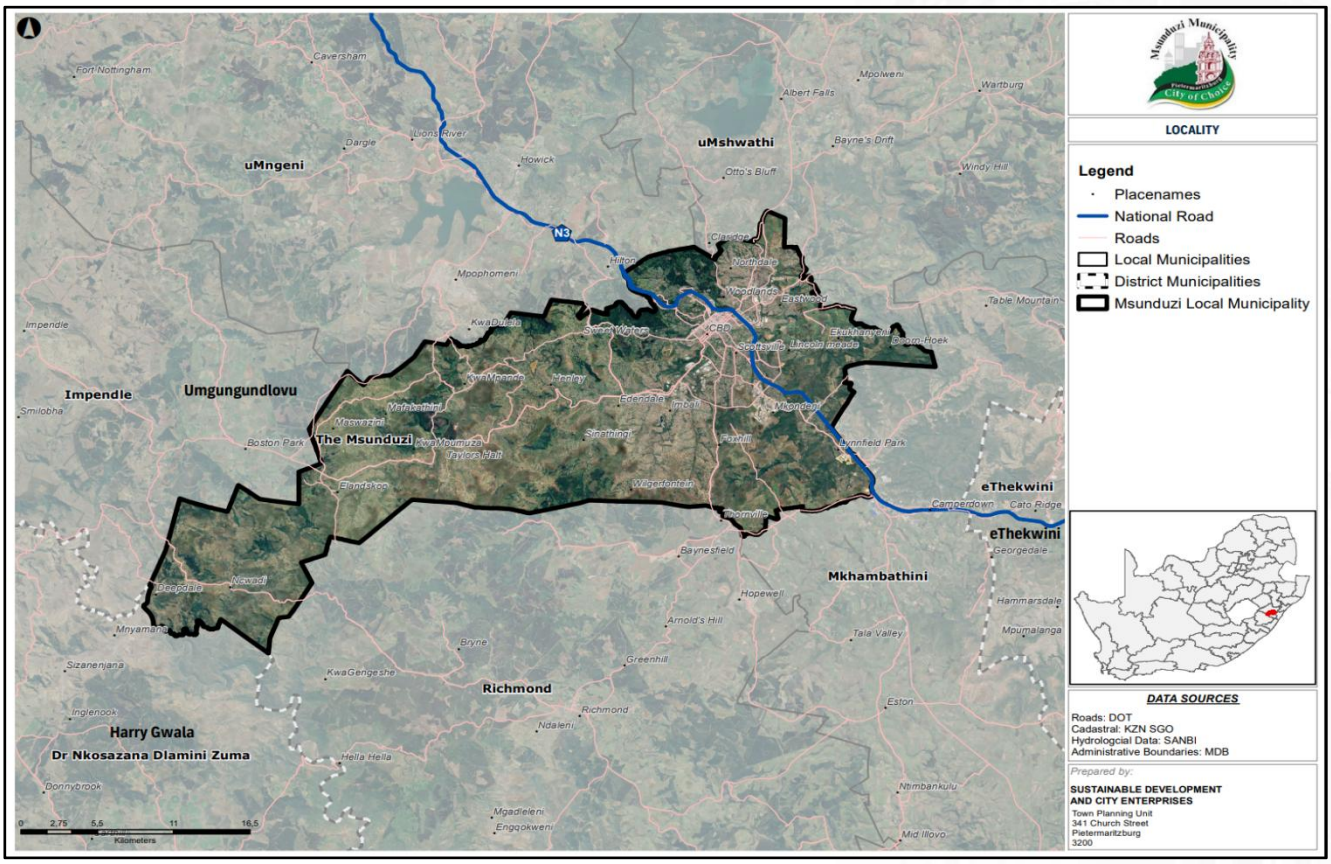


Figure 2: Msunduzi Municipality locality

History has significantly shaped the city, evidenced by the apartheid city model which is still evident almost 28 years after achieving democracy. Linked to this is the clear disparity of wealth, employment opportunities, plot sizes, levels of neighbourhood planning, and access to basic services (especially sanitation) which needs to be addressed in the West, East, South-West of the CBD (i.e. Edendale, Vulindlela, Imbali, Northdale, Shenstone, and

Ambleton etc. Moreover, settlement patterns are grotesquely distorted and skewed. The city is inconvenient for most citizens as they generate enormous amounts of movement. The provision of efficient and viable public transportation is almost impossible, mainly because of low densities and the dispersed location of activities. Installation and maintenance of engineering services are costly, which also has implications for the affordability of utilisation of services, it is also noted that settlements on the periphery tend to place larger burdens on city expenditure for service provision. Poverty and inequality have deepened and for many, the city has become a hostile place in which to live offering few economic, social, cultural, environmental, or recreational opportunities.

Managerially, the municipality is divided into five Area Based Management (ABM) areas, namely:

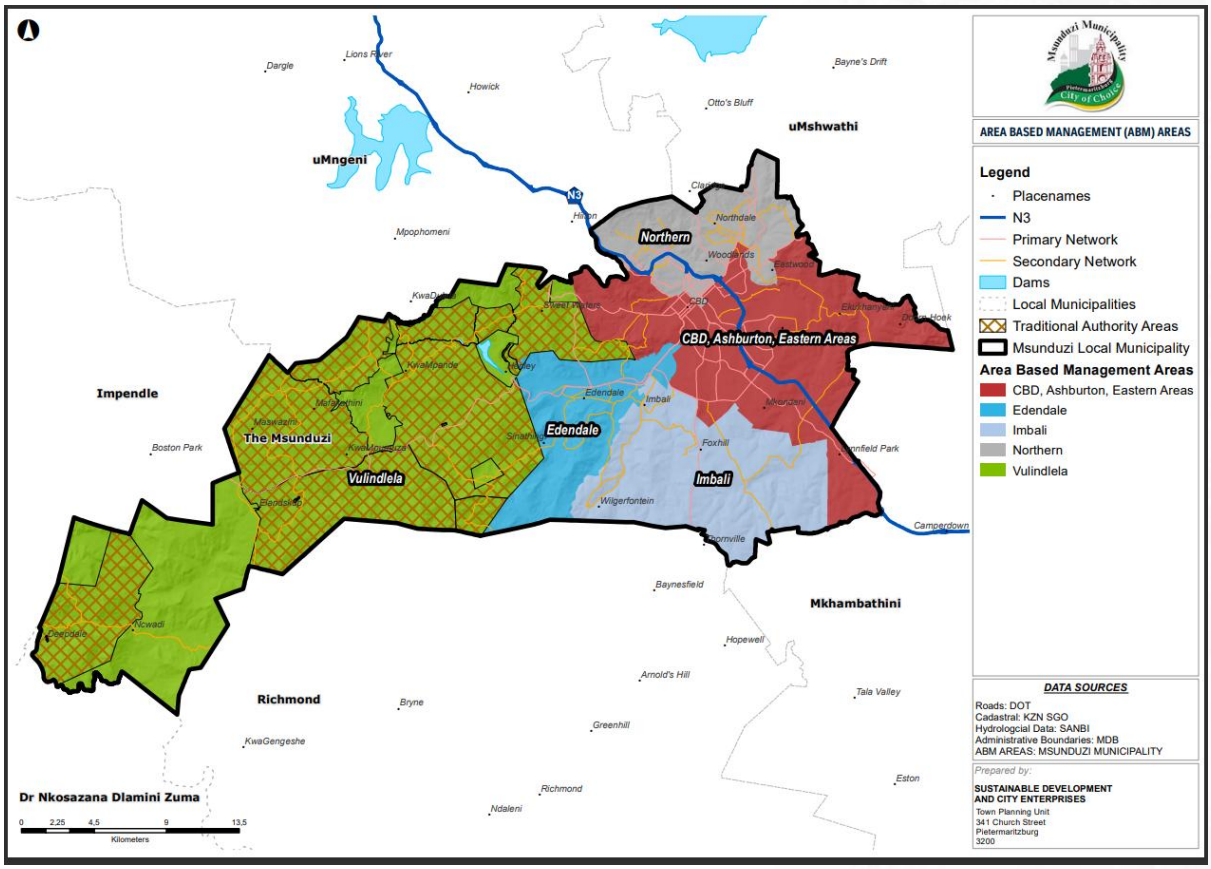


Figure 3: Msunduzi Area Based Management demarcation

ABM is implemented in a soft-core manner, which implies that although the departments are still centralized, the approach to development is coordinated through community-based planning.

3.1 Pietermaritzburg City

Pietermaritzburg was established in 1838 by Boers, who named it after two of their leaders, Pieter Retief and Gerrit Maritz, who had been killed by Zulu forces. The British took control of the town in 1843 and transformed it into a military garrison. They also made it the administrative centre for the KwaZulu-Natal province. Over time, the town attracted settlers from various backgrounds, including British and German immigrants, contributing to its diverse cultural landscape. A significant historical event occurred in Pietermaritzburg in 1893 when Mahatma Gandhi was arrested for riding in a "whites only" train carriage. The city's architectural style reflects its Victorian and Edwardian heritage, with many well-preserved buildings still standing today.

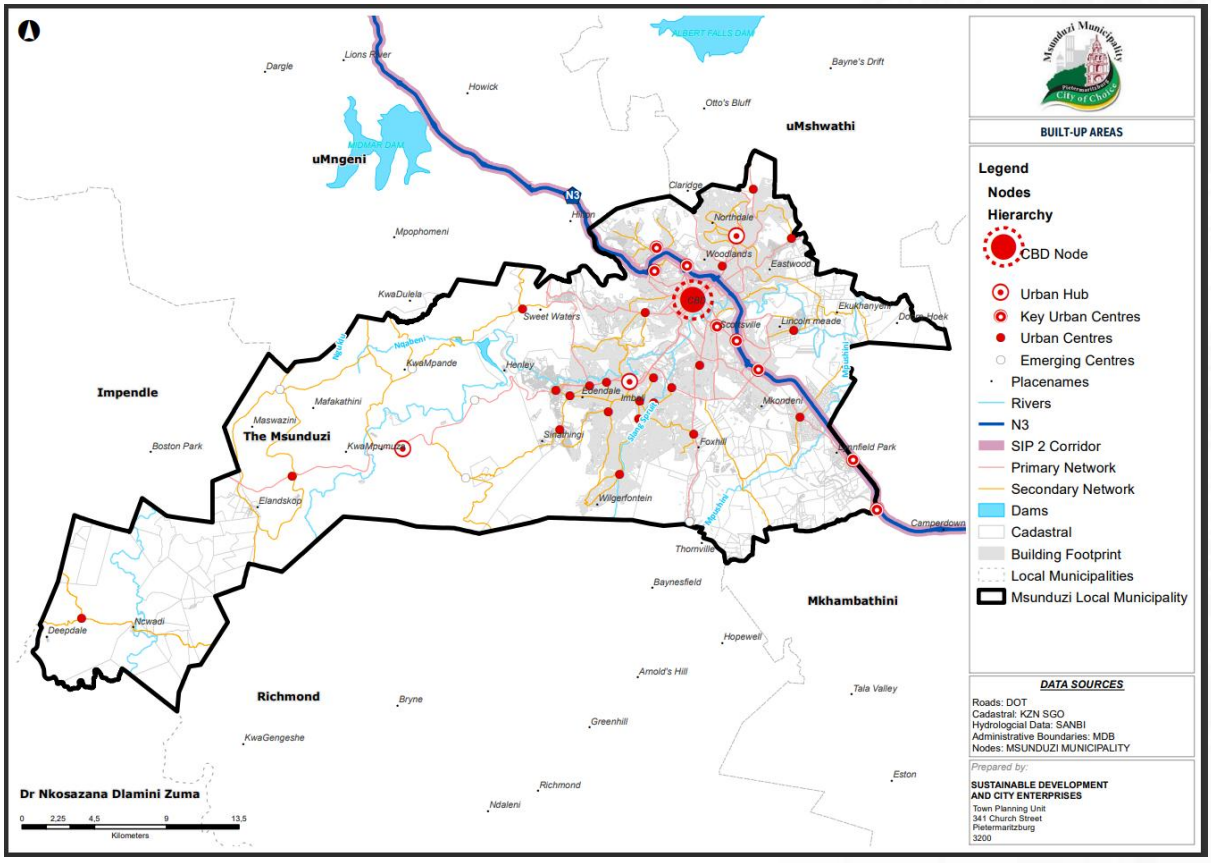


Figure 4: Msunduzi Municipality urban centers

Pietermaritzburg became a significant economic centre, with industries like aluminium, timber, and dairy playing a crucial role. Pietermaritzburg is a melting pot of cultures, with residents hailing from Indian, African, White, and Coloured backgrounds. The city's heritage is celebrated through its architectural landmarks, museums, and historical sites, including the Natal Museum and the City Hall. Pietermaritzburg is often referred to as the "City of Choice" due to its strategic location as a gateway between Durban and Johannesburg, as

well as its rich history and culture. The city has a mixture of races and languages, but the most spoken language is isiZulu.

3.2 Municipal developmental vision

VISION "By 2040 Msunduzi will be a safe, vibrant, sustainable and smart metropolis."

A City Development Strategy (CDS) provides a vision for a city to move towards, aiming to create conditions that increase the likelihood of success in reaching this goal. Internationally, City Development Strategies have focused on a few (four to five) key pillars at the heart of a city's economic, social and environmental levers. Whilst all municipalities are required by legislation to produce Integrated Development Plans –IDP (5-year plans), prepared every five years and reviewed annually, strategies stand in clear distinction from these.

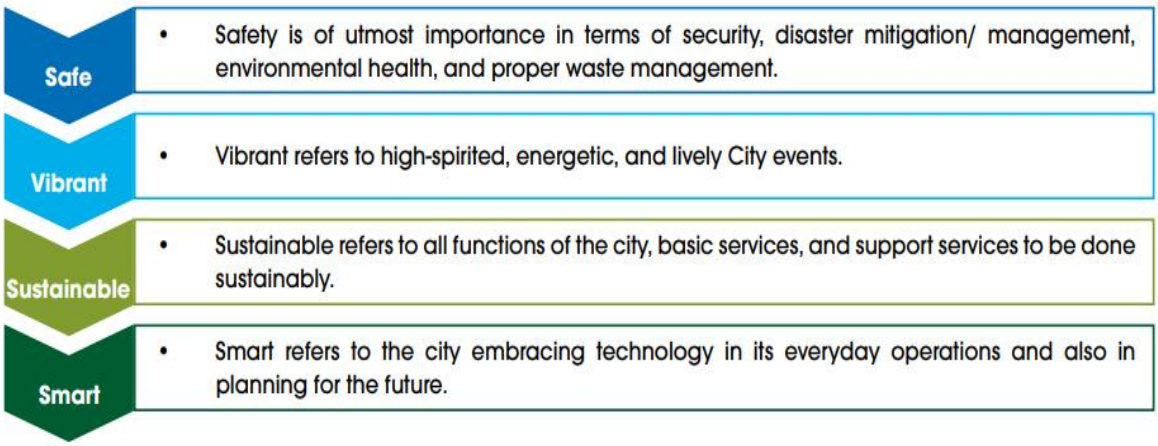


Figure 5: Municipal strategic pillars

MISSION "To ensure that the Municipality functions efficiently to deliver basic, social, economic and environmental services to build better Communities."

VALUES Transparency: Municipal employees and Councillors should be transparent to the public and we will not promise what we cannot deliver. Result-oriented: Municipal employees and Councillors should be result driven in order to enhance service delivery Ubuntu: Municipal employees and Councillors should be compassionate to the needs of citizens. Sustainability: Municipal employees and Councillors should strive at deriving sustainable solutions Teamwork: Municipal employees and Councillors should work as team in building better life for the Citizens of Msunduzi.

3.3 Demographics

The Stats SA census data of 2011 and 2022 presents a picture of a dynamic Municipality with an annual growth 2, 7% over the last decade. While population has been ascending from 552 801 people in 2001, to 618 536 people in 2011 and reached 817 725 people in 2022. The household numbers have been steadily rising from 135 311 households in 2001 to 164 625 households in 2011 and to 213 727 households in 2022. Msunduzi Municipality Annual Report 23/24 concede that the current rate of population growth and the increase in the household numbers is directly proportional to the increase in the demand for basic services that the municipality has render to the population within its jurisdiction.

Indicator	Msunduzi	uMgungundlovu	KZN
Area((km^2)	634,0 km^2	9 512,9 km^2	93 361,3 km^2
Population	817 725	1 235 715	12 423 907
Population Density	1 290/km^2	130/km^2	132/km^2
Humber of Households	213 727	307 842	2 853 7141
Household Density	337/km^2	32/km^2	30/km^2
Average Household Size	3,8	4,0	4,4

Table 1: Demographics (Stats SA, 2022)

The increase in population and households due to the natural growth rate and inward migration from other regions, Places is a heavy burden on the municipality for the political and administrative leadership to guide the limited distribution of resources. This requires the prioritization of issues and challenges that the municipality must focus, taking an outward perspective and the preservation of the future prosperity of the municipality.

Year	Low growth 1.1%	Medium growth rate 2.2%	High growth rate 3.3%
2026	742 924	852 526	950 210
2027	751 096	871 282	981 567
2028	759 268	890 038	1012924
2029	767 440	908 794	1 044 281
2030	775 612	927 550	1 075 638

Table 2: Msunduzi Municipality population projections

Population Projection of the municipality is expected exceed 1000 000 people in 2030 with a growth rate of 3.3%. The increase in population observed in the past decade is predicted to continue to arise due to higher birth rate, emigration of people from other regions.

3.4 Municipal physical characteristics

According to the Msunduzi SDF the bio-physical environment 46% of the land in the municipality is natural open space including a critical water catchment area, with 16% being high potential agricultural land and another 16% suitable for development. If the natural open space, water catchment area and high potential agricultural land is maintained and the quality improved, Msunduzi Municipality would be a very sustainable and resilient city. Having only 16% of the land available for development should not pose a challenge since development should be dense and intense enough to make the most efficient use of the built environment infrastructure and a compact urban form. The implication for development is that the higher costs associated with higher density development should be offset by lower costs of providing public transport.

The largest river that flows through the Msunduzi Municipality is the uMsunduzi River and its associated tributaries. The tributaries that pass through the Msunduzi Municipality form part of the strategically important water catchment for the critical water supply dams of the Pietermaritzburg–Durban urban development region.

The Municipal SDF further notes that abundance of urban and industrial effluents in the water has caused the river's water quality and aquatic health to be poor. Most of the wetlands in the municipality are small, with an average size of approximately 1 ha. Despite their small scale, their continued existence is still threatened by rapidly expanding formal and informal development. Increased development activity coupled with insufficient waste removal continue to increase water pollution and storm-water run-off and have resulted in poor quality water that is regarded as unsuitable for human consumption. Urban expansion in the Municipality has also led to the degradation of large areas of land with high agricultural value. Unregulated and unsustainable land development has resulted in land degradation and increased water and soil contamination. Land degradation has also led to an increase in invasive alien vegetation, which has resulted in the loss of local landscape and scenic value.

High agricultural potential land where existing commercial agriculture activity currently occurs is predominantly located towards Manderston and around Bishopstowe. These commercial agricultural activities include sugar cane production, livestock production, and game farming. Some subsistence dry land agricultural production occurs to the west of the Msunduzi Municipality, whilst commercial timber farming can be found towards the high-lying areas in the north as well as in the vicinity of Taylor's Halt.

3.5 Key strategic challenges

The Municipal IDP identifies the major challenges hindering governance and service delivery. These highlights the overall impediments to municipal planning and implementation of mechanisms and initiatives directed towards improving the socio-economic conditions of local communities.

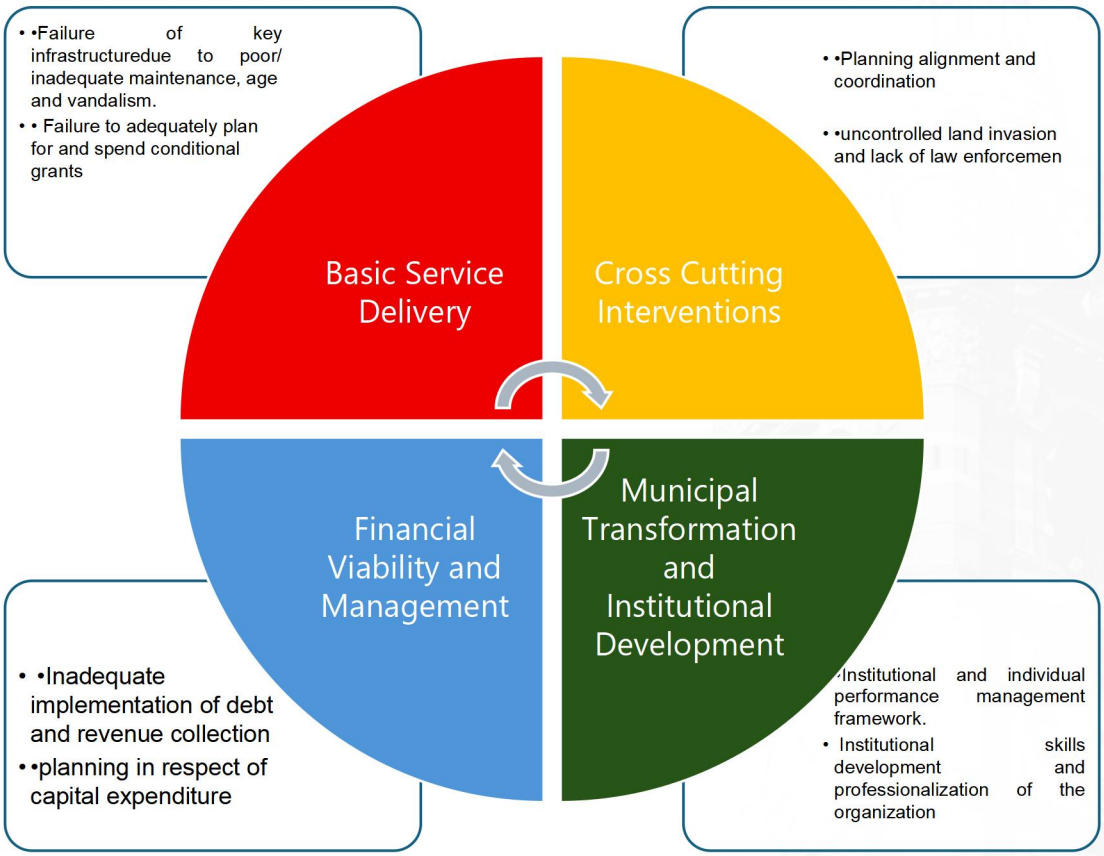


Figure 6: Municipal key challenges

3.6 Key City Development Strategies

Building a capable and developmental municipality: As a minimum, Msunduzi requires a capable team of men and women to ensure that development and maintenance of infrastructure occur, budgets are timeously spent and that there is effective, efficient and economic delivery. This does require very strong motivation, management and monitoring systems to be put in place to ensure all senior management take personal responsibility for delivery.

Back to Basics – A city which is not continually cleaning, repairing, enforcing, maintaining and responding is unlikely to be a city which grows economically and satisfies its residents, visitors and businesses. Every sector of activity requires clear implementation and operational plans which are implemented without fail.

Improving Infrastructural efficiency – There is a need for a realistic review of infrastructure within the city and an effective and efficient plan to be developed to allow for budgetary and HR planning. This must include establishment and management of an asset register for the city which will allow for planning and anticipating future operational and capital expenditure.

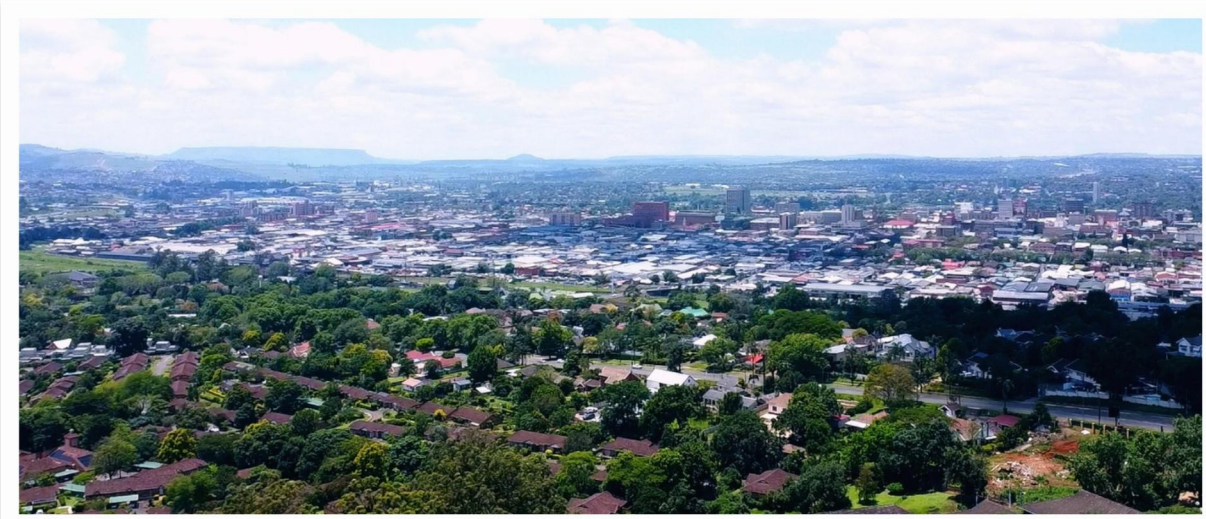
Building Msunduzi's financial base – To effect change, Msunduzi will need to be more financially independent and sustainable. This includes a need to improve its ability to spend grants, addressing billing and collection issues as well as cutting expenditure in non-essential areas. There is also a need to maintain and protect the municipality's existing income streams and to look at generating new growth areas for the future.

Growing the Regional Economy – In addition to building the municipality's revenue base, there is an urgent need to generate growth in the regional economy. This includes both LED initiatives as well as prioritizing, supporting and assisting existing businesses within the city, addressing their spatial and infrastructure requirements. Msunduzi's resources and strengths need to be used to their full extent.

Serving as a provincial capital – The provincial legislature and executive and their needs must be integrated into the plans of the city and the city's plans must be reflected in provincial strategies. This requires a far closer working relationship with the province and other state bodies. A key area of focus must be on how the establishment of a new Provincial government precinct can be used as a development and regeneration tool within the city.

Creating a learning city and a city of learning – As an important regional and even continental educational hub, the city must promote education and use its tertiary institutions to help it become a learning institution. There is a need to re-start and prioritize interactions with MIDI, capitalize on the investments that are being made in the municipality by educational institutions and address the needs of students within the city.

Spatial effectiveness – Msunduzi needs to plan for growth within the city. This includes looking at how an increased population will be accommodated and serviced. Densities must be incrementally increased along public transport corridors, with continuous improvements in non-motorized and other mobility options as well as equitable access to social facilities.



4. Strategic framework and Policy alignment

Africa Agenda 2063

Agenda 2063 is a 50-year development framework adopted by the African Union to guide Africa's transformation from 2013 to 2063, marking the continent's Golden Jubilee of independence and the 50th anniversary of the Organisation of African Unity (OAU). It is rooted in Pan-Africanism and the African Renaissance, aiming to shift focus from political independence to inclusive social and economic development, democratic governance, peace, and continental integration. The agenda emphasizes self-determination, unity, and Africa's active role in global affairs.

SADC Vision 2050

SADC Vision 2050 is expressed in three pillars namely; Industrial Development and Market Integration, Infrastructure Development in Support of Regional Integration, and Social and Human Capital Development; and built on a firm foundation of Peace, Security, and Good Governance. "By 2050, we envision a peaceful, inclusive, competitive, middle- to high-income industrialised region, where all citizens enjoy sustainable economic well-being, justice and freedom".

National Development Plan

The National Development Plan (NDP) aims to ensure universal access to reliable and hygienic water and sanitation services in South Africa by 2030, addressing significant challenges in the sector. The NDP recognizes water as a critical resource for social and economic development in South Africa, a country characterized by water scarcity. It sets ambitious targets to improve water and sanitation services, ensuring that all citizens have access to safe and reliable facilities. Key objectives include:

- Universal Access: Achieving equitable access to reliable water supply and sanitation services for all South Africans by 2030, in line with the

Sustainable Development Goal (SDG) Target 6.2.

- Infrastructure Development: Developing and maintaining water and sanitation infrastructure to support economic growth and public health.

Key Strategies and Initiatives

Provincial Growth Development Strategy

The PGDS serves as a long-term development framework for provinces, aiming to accelerate economic growth, improve quality of life, and promote social cohesion. It is not merely a government plan but a collaborative strategy that aligns national, provincial, and local resources, as well as private sector investment, to achieve sustainable development outcomes.

District Development Model

The District Development Model builds on the White Paper on Local Government (1998), which seeks to ensure that "local government is capacitated and transformed to play a developmental role". The White Paper says developmental local government "is local government committed to working with citizens and groups within the community to find sustainable ways to meet their social, economic and material needs and improve the quality of their lives". The District Development Model (DDM) is an operational model for improving Cooperative Governance aimed at building a capable, ethical Developmental State. It embodies an approach by which the three spheres of government and state entities work in unison in an impact-oriented way, and where there is higher performance and accountability for coherent service delivery and development outcomes. It is a method of government operating in unison focusing on the municipal district and metropolitan spaces as the impact areas of joint planning, budgeting and implementation.

National Water and Sanitation Master Plan: This plan guides the water sector's investment and development strategies, focusing on water security, infrastructure maintenance, and service delivery. It aims to coordinate efforts across various stakeholders to address current challenges and future needs.

National Sanitation Integrated Plan (NSIP): Developed to provide a road map for improving sanitation services, the NSIP addresses backlogs, promotes innovative sanitation solutions, and ensures the sustainability of existing infrastructure

City Development Strategy

The City Development Strategy (CDS) is a long-term strategic framework that provides a road map and the strategic direction for the city to achieve its long-term vision. Unlike IDPs, CDS's are not comprehensive plans, but instead are a selection of a few strategic or catalytic

thrusts that address key problems within a local area. CDS's are complementary to IDPs, informing the IDP and using municipal budgets and Service Delivery and Budget Implementation Plans (SDBIPs) to implement the proposed strategy.

Integrated Development Plan

An Integrated Development Plan (IDP) is a strategic, five-year municipal plan that coordinates development, service delivery, and resource allocation to improve the quality of life for all residents. An IDP serves as a comprehensive framework for municipal development, integrating economic, social, spatial, and environmental planning. It aims to overcome historical inequalities, improve service delivery, and guide sustainable development in both urban and rural areas. The plan ensures that all municipal projects, budgets, and policies align with long-term development goals and national or provincial priorities.

Spatial Development Framework

A Spatial Development Framework (SDF) is a long-term strategic plan that provides guidance on how land should be used and developed to achieve social, economic, and environmental objectives. In South Africa, SDFs exist at both national and municipal levels, with the National Spatial Development Framework (NSDF) serving as the overarching policy framework, and Municipal Spatial Development Frameworks (MSDFs) translating these principles into local planning practice.

Water Service Development Plan

A Water Services Development Plan (WSDP) is a long-term plan that outlines how to provide water and sanitation services in a sustainable, affordable, and efficient manner. WSDPs consider a variety of factors, including socioeconomic issues, technical issues, financial issues, institutional issues, and environmental issues. WSDPs are required by the Water Services Act, which also regulates water services authorities (municipalities).

The WSDP system is an online tool that helps water services authorities with their planning processes. The system includes a database that allows users to access information on demographics, service levels, and infrastructure. The WSDP system also generates a report that includes situation assessment, water services strategies, performance targets, water services projects, and infrastructure investment requirements.

Infrastructure Asset Management: Water and Sanitation

Infrastructure development for water supply and sanitation initially centered on the main urban nodes of the greater Pietermaritzburg and Edendale. The infrastructure has been expanded to make provision for the increase in urbanisation and organic growth, especially in the greater Edendale and Vulindlela.

The municipality is in the process to develop a detailed Water and Sanitation Infrastructure Master Plan, that makes provision for and recommendations, to meet the current and future needs, up to 2050. This follows the existing Water and Sanitation Master Planning and Real Time Modelling for Network Master Planning (2014-2016) and Water and Sanitation Master Plans, per area, for Vulindlela (Water), Edendale (Water), Msunduzi (Sewer), the SeDIS Master Plan, and Pietermaritzburg Water Master Plan.

The WSA has an Asset Management Policy in place which is in alignment with the Municipal Finance Management Act (MFMA) and the General Accounting Practices (GRAP) requirements. The WSA furthermore has an updated fixed asset register (FAR), to account for its assets, including those related to water and sanitation. The spatial representation of assets from the FAR, however seems lacking. It must be noted that the WSA is currently implementing a comprehensive asset management information system, which will include the spatial representation of water and sanitation assets. The table below indicates the total number of asset components for water and sanitation in the FAR (2023).

Infrastructure Procurement Plan for Water and Sanitation

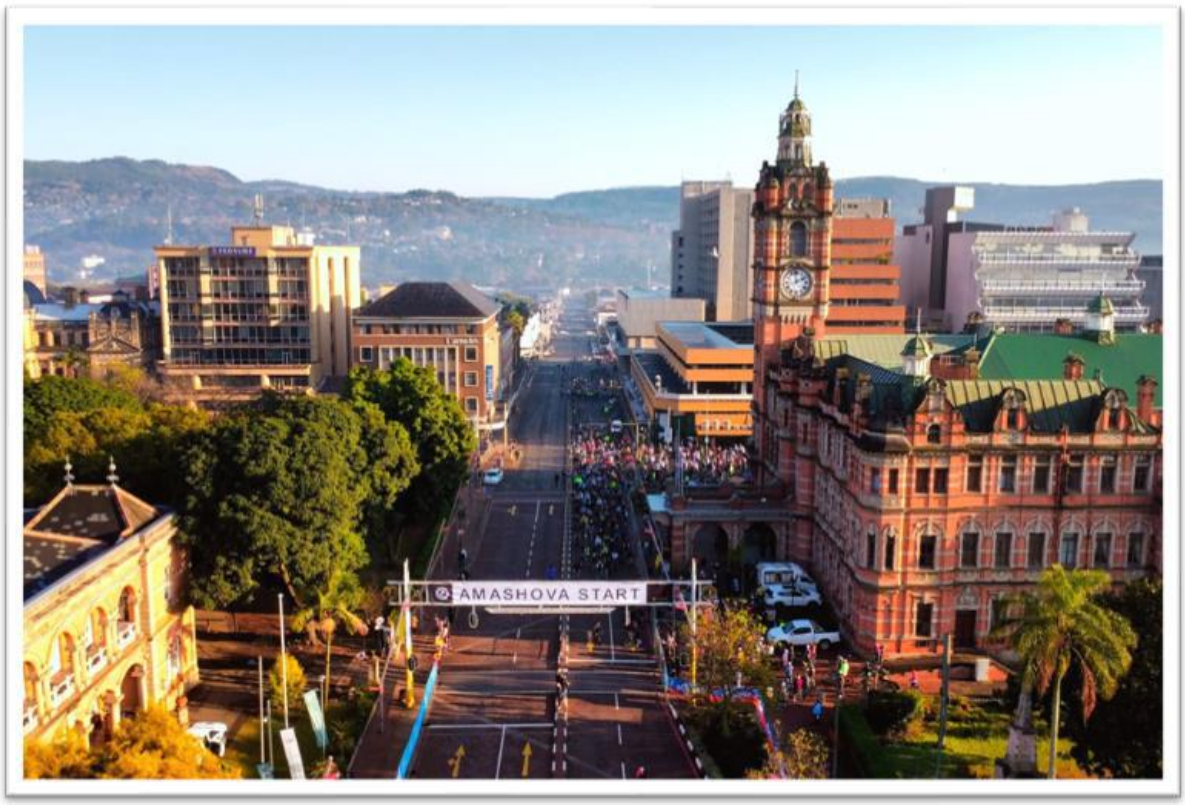
Supply Chain Management Policy is divided into two parts. Part 1 focuses on Goods and Services and Part 2 on the Infrastructure Procurement and Delivery Management. is Part 2 is issued in terms of Section 168 of the Municipal Finance Management Act of 2003 in support of Regulation 3(2) of the MFMA The Supply Chain Management Regulations as a Treasury guideline determining a standard for municipal supply chain management policies.

MFMA Circular No 77: Model SCM Policy for Infrastructure Procurement and Delivery Management provides guidance to municipalities on the establishment of a suitable supply chain management system for infrastructure delivery which is better able to deliver value for money, while minimizing the scope for corruption.

Comprehensive five-year procurement plan is being reviewed. The infrastructure procurement plan, assist the organization in terms of financial planning and it is guided by part 2 of the Supply Chain Management Policy (Infrastructure Procurement and Delivery Management).

Water and Sanitation Procurement Plan (2022-2027) is being reviewed together with other service delivery business units.

A committee system comprising the documentation committee also known as bid specification committee, evaluation committee and tender committee (BAC) also known as bid adjudication committee applies to all procurement procedures where the estimated value of the procurement exceeds the financial threshold for quotations. The table below depicts the summarised Procurement Plan per Business Unit.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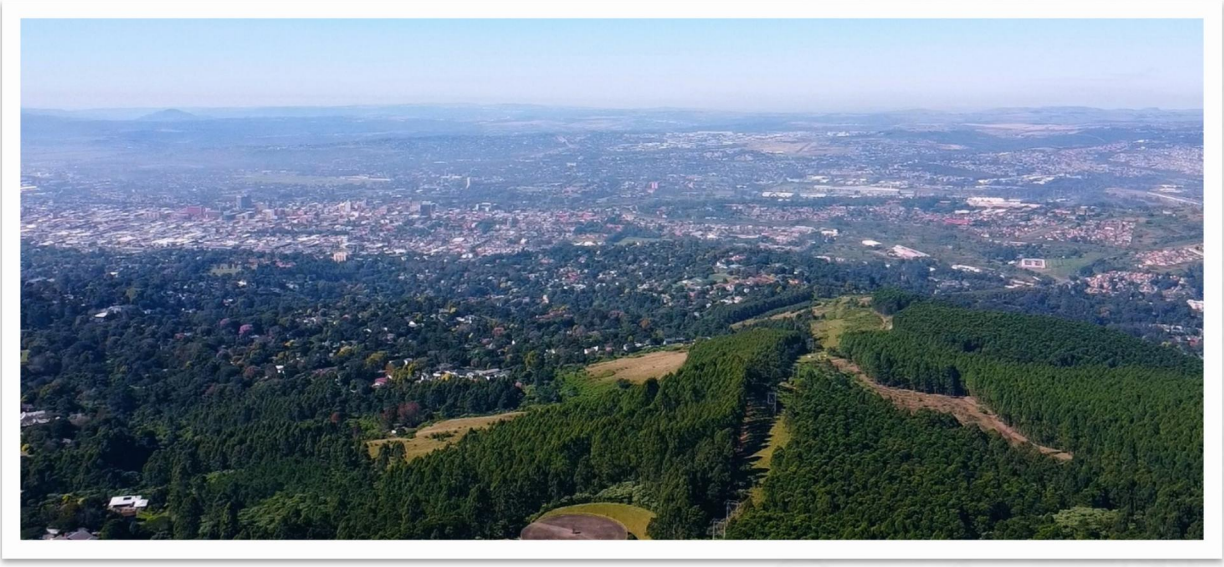
5. SDG and indicators monitoring and reporting

SDG 6: Ensure availability and sustainable management of water and sanitation for all.

The municipality is faced with a rapid increase of population, with over 825 000 people residing in the municipality and the projections are expected to exceed 1 million people before 2030. The demand for services exacerbated by the population increases highlights the critical importance of providing and adhering to the minimum standards of quality of life. Pietermaritzburg being one of the key intermediate cities within KwaZulu-Natal must strive to align with current developmental trends and modern governance practice. According to National Water and Sanitation Master Plan (2018) South Africa can avoid a projected 17% water deficit by 2030 by taking bold action to curb water loss and inefficient systems.



The Msunduzi Local Municipality (MLM) is a Category B municipality and Water Services Authority (WSA) within the uMgungundlovu District Municipality (uMDM). Msunduzi Local Municipality provides bulk and reticulation water and sanitation services. However, it purchases all surface water sourced potable water from the uMgeni-uThukela Water Board (UUW) as it is the bulk Water Services Provider (WSP). The WSP provides water to the MLM from its uMngeni bulk system, which also provides potable water to other consumers in the KZN province. Due to the urbanisation and desires of households for higher levels of service, increasing pressure has been experienced by the existing bulk infrastructure. Msunduzi Local Municipality as a Water Service Authority is also dependent on the planning and development of services and infrastructure by the bulk WSP, uMgeni-uThukela Water Board.

The municipality has the responsibility of ensuring that all residents residing in the municipal area have access to at least a basic supply of water (communal supply) and sanitation service (VIP). The municipality has implemented many new projects to eradication of backlogs in water and sanitation. There is a total estimated 160 172 households (75%) with a direct backlog in water supply, however it should also be interpreted as households with unreliable water supply which still means that these households do not receive adequate services. Water losses are still relatively high at an average of 25.4% and Non-Revenue Water being at yearly averages of 43.8%.

5.1 Target: 6.1

Target: 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all

Sustainable Development Goal 6 (SDG 6) aims to ensure the availability and sustainable management of water and sanitation for all. The goal recognizes that access to safe drinking water, adequate sanitation, and proper hygiene are fundamental to public health, environmental sustainability, and socio-economic development. SDG 6 emphasizes universal and equitable access to safe and affordable drinking water, adequate sanitation and hygiene, improved water quality through the reduction of pollution, efficient water uses across all sectors, and the protection and restoration of water-related ecosystems. The goal also highlights the importance of strengthening the participation of local communities in water and sanitation management and enhancing institutional capacity to sustainably manage water resources.

Achieving SDG 6 requires coordinated efforts across all spheres of government, as well as partnerships with communities, the private sector, and development stakeholders. Within the context of Msunduzi Local Municipality, SDG 6 is particularly relevant given the municipality's responsibility for ensuring the provision of reliable water supply and sanitation services to residents. As a water services authority, Msunduzi plays a critical role in maintaining and expanding water and sanitation infrastructure, improving service delivery, and ensuring equitable access to these essential services. The application of SDG 6 within Msunduzi Local Municipality is reflected through initiatives aimed at improving water supply reliability, reducing water losses through infrastructure maintenance and upgrades, expanding sanitation services in under-served communities, and promoting responsible water use.

5.1.1 Households with access to clean and safe water

Access to piped water within the jurisdiction of Msunduzi Local Municipality reflects varying levels of service provision across households. In terms of the municipal annual WSDP Performance Water Services Audit Report 2023/2024, most households have access to a piped (tap) water supply inside the dwelling, accounting for 116,575 households (54.5%), indicating that more than half of residents enjoy the highest level of water service available at household level. A significant proportion of households, 78,501 (36.7%), have access to piped water inside the yard, which provides reasonable access to water but still requires residents to collect water from outside the dwelling. Additionally, 9,559 households (4.5%) rely on piped water from community standpipes, typically shared among multiple households and often found in areas where formal infrastructure is still being expanded. However, 9,092 households (4.3%) within the municipality do not have access to piped water, highlighting ongoing service delivery challenges and the need for continued investment in water infrastructure and equitable service provision. Furthermore, the municipal Water Development Plan indicates that free basic water to the volume of 6kl/month is provided, to 4 890 approved indigent customers as by 31st March 2023.

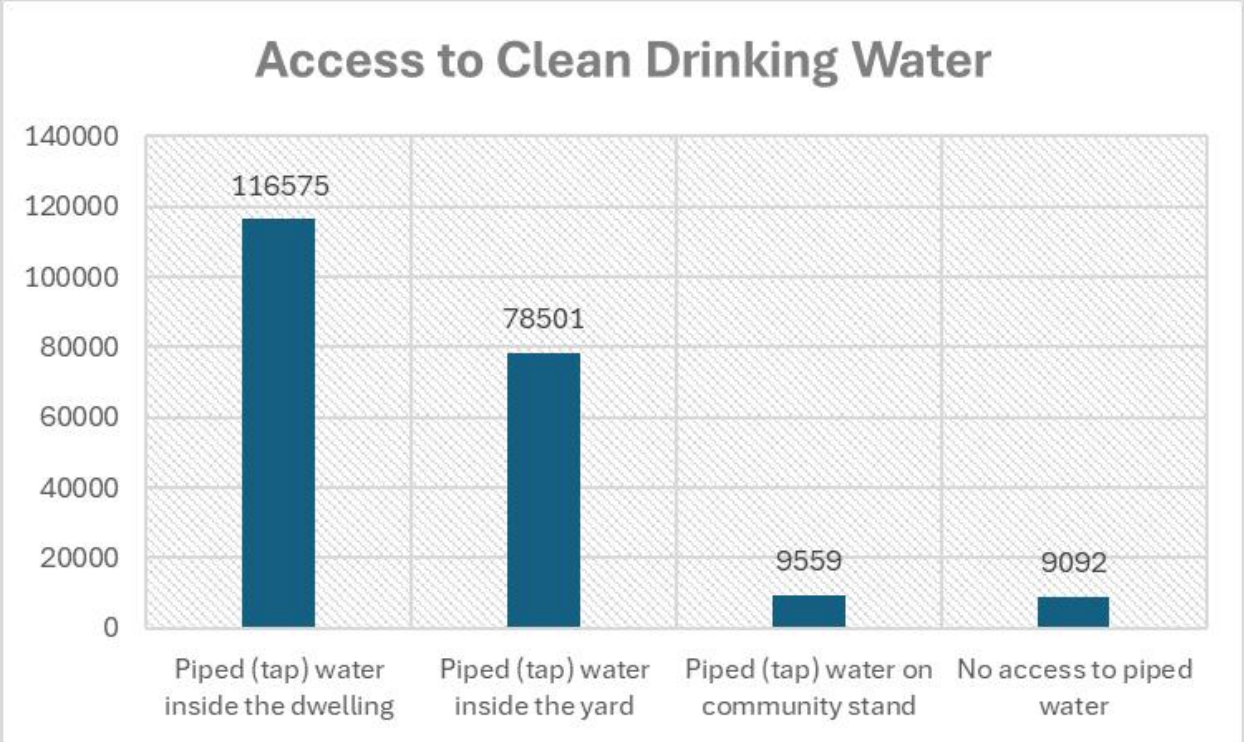


Figure 7: Households with access to clean drinking water

Overall, while most households in Msunduzi have access to piped water either inside the dwelling or within the yard, the presence of households relying on communal standpipes or lacking piped water entirely underscores the importance of continued efforts to expand water infrastructure and improve access to safe and reliable water services. Figure 7 shows the number of households with piped (tap) water inside the dwelling, piped (tap) water inside the yard, piped (tap) water on community stand, and no access to piped water.

5.1.2 Strategic alignment of Target 6.1

Framework / Policy Instrument	Framework / Policy Instrument	Link to SDG 6.1 (Access to Safe Drinking Water)	Implication for Msunduzi Local Municipality
Sustainable Development Goal 6 – Target 6.1	By 2030, we will achieve universal and equitable access to safe and affordable drinking water for all.	Indicator 6.1.1 measures the proportion of the population using safely managed drinking water services (water on premises, available when needed, and free from contamination).	The high proportion of households with piped water inside dwellings and yards demonstrates progress toward this target, while households using communal standpipes or lacking piped water highlight areas requiring further infrastructure investment.
Agenda 2063	Aspiration 1: A prosperous Africa based on inclusive growth and sustainable development. This includes improved access to basic services such as water and sanitation.	Agenda 2063 emphasizes universal access to clean water and sanitation as a key component of improving living standards and human well-being across African cities and communities.	Expanding piped water access in Msunduzi contributes to improving quality of life, reducing inequality, and supporting sustainable urban development in line with continental priorities.

Framework / Policy Instrument	Framework / Policy Instrument	Link to SDG 6.1 (Access to Safe Drinking Water)	Implication for Msunduzi Local Municipality
KwaZulu-Natal Provincial Growth and Development Strategy	Strategic Goal: Improve quality of life through reliable infrastructure and basic service delivery.	PGDS prioritizes access to safe water and sanitation as part of building resilient communities and improving public health outcomes.	Addressing households without piped water and improving service reliability supports provincial targets for equitable service delivery and infrastructure development in KwaZulu-Natal.
uMgungundlovu District Development Plan	Promote sustainable infrastructure development and equitable access to basic services within the district.	The district plan aligns with the SDG targets by supporting expanded water infrastructure, improved water security, and inclusive service provision across municipalities.	Msunduzi, as the district's economic hub, plays a critical role in ensuring equitable access to water services and supporting district-wide development and resilience.
Msunduzi Local Municipality Integrated Development Plan (IDP)	Ensure provision of sustainable, reliable, and equitable basic services including water and sanitation to all communities.	Municipal objectives align with SDG 6 by prioritizing water infrastructure expansion, maintenance of existing systems, and improved service delivery to underserved areas.	Continued investment in water infrastructure, reduction of households without piped water, and upgrading of communal water services will directly contribute to achieving SDG 6 at the local level.

Table 3: Strategic alignment

Access to safe and reliable drinking water within Msunduzi Local Municipality contributes directly to the achievement of Sustainable Development Goal 6 (SDG 6): Clean Water and Sanitation, particularly Target 6.1, which aims to achieve universal and equitable access to safe and affordable drinking water for all by 2030. Progress toward this target is measured through Indicator 6.1.1, which assesses the proportion of the population using safely managed drinking water services, including water that is available on premises and safe for consumption. This global objective is reinforced at the continental level through Agenda 2063, specifically under Aspiration 1, which emphasizes improving the quality of life of African citizens through access to basic services such as clean water and sanitation.

At the provincial level, the KwaZulu-Natal Provincial Growth and Development Strategy prioritize reliable infrastructure and equitable access to basic services, including potable water, as a key component of improving living standards and supporting sustainable development. Similarly, the uMgungundlovu District Development Plan promotes the expansion of water infrastructure and equitable service provision to ensure that all households within the district have access to basic water services. In alignment with these frameworks, the Integrated Development Plan of Msunduzi Local Municipality prioritizes the sustainable and equitable provision of water services through the expansion and maintenance of water infrastructure, the reduction of households without piped water, and the improvement of service delivery to under-served communities. Collectively, these development frameworks reinforce the municipality's commitment to improving access to safe drinking water and advancing sustainable development outcomes.

In addition to improving access to water services, Msunduzi Local Municipality has also demonstrated strong performance in maintaining drinking water quality. The municipality received Blue Drop Certification from the Department of Water and Sanitation, achieving an overall score of 97.94%, which reflects excellent performance in drinking water quality management, regulatory compliance, infrastructure maintenance, and operational management. This recognition indicates that the municipality's water supply system meets high national standards for the provision of safe and reliable potable water. The Blue Drop status therefore complements the municipality's efforts to expand access to piped water services and supports the achievement of SDG 6, particularly Target 6.1, which focuses on ensuring universal access to safe and affordable drinking water. While continued investment is required to extend water infrastructure to households that still rely on communal standpipes or lack piped water, the Blue Drop certification demonstrates that the water supplied within the municipality generally meets stringent quality standards, contributing to improved public health, environmental sustainability, and overall quality of life for residents.

5.1.3 Reliability

The municipal annual WSDP Performance Water Services Audit Report 2023/2024 conducted a reliability profile for water provision services across the municipality. The assessment is vital to weighing the municipal improvement on water service provision across different critical outputs. The municipal faces a monumental challenge of with 53 579 household having access to reliable water while 160 172 are categorised as not reliable.

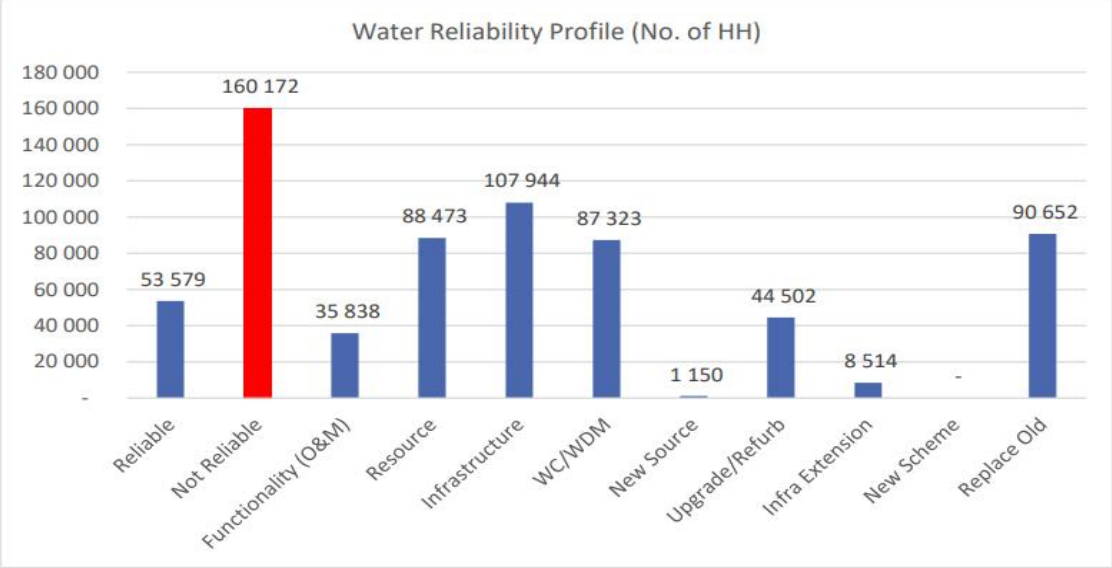


Figure 8: Household water reliability profile

The report noted that the main factors affecting water services reliability in the WSA include water losses, ageing infrastructure, asbestos infrastructure, rapid urbanisation and illegal connections. Furthermore, the Water Service Authority has limited technical, financial and human resources to address operations and maintenance of existing infrastructure for water and sanitation.

5.1.4 Opportunities and impediments to reliable water provision

The municipality has applied for Budget Facility for Infrastructure (BFI) on the Msunduzi Water and Sanitation Infrastructure Upgrade (MWSIU) Programme. The MWSIU Programme is a water and sanitation project to supply combined 226 329 people with water and sanitation in Willowfountain, parts of Vulindlela and Shenstone improving capacity through water infrastructure upgrades. The Msunduzi Annual Report 2024/2025 notes that the budget for the planning studies was approved under the Regional Bulk Infrastructure Grant (RBIG), and the consultants are busy with the finalization of the planning phase.

The Municipality is also busy with Multiyear projects in relation to New Water Pipeline, as it stands, we have completed, about 34km of the water pipeline, these include the Darvill Project and Ezinketheni. Through the Human Settlements department, we have also been able to facilitate the 2000m bulk sewer outfall installed for Khalanyoni, this project was completed by the 2025.

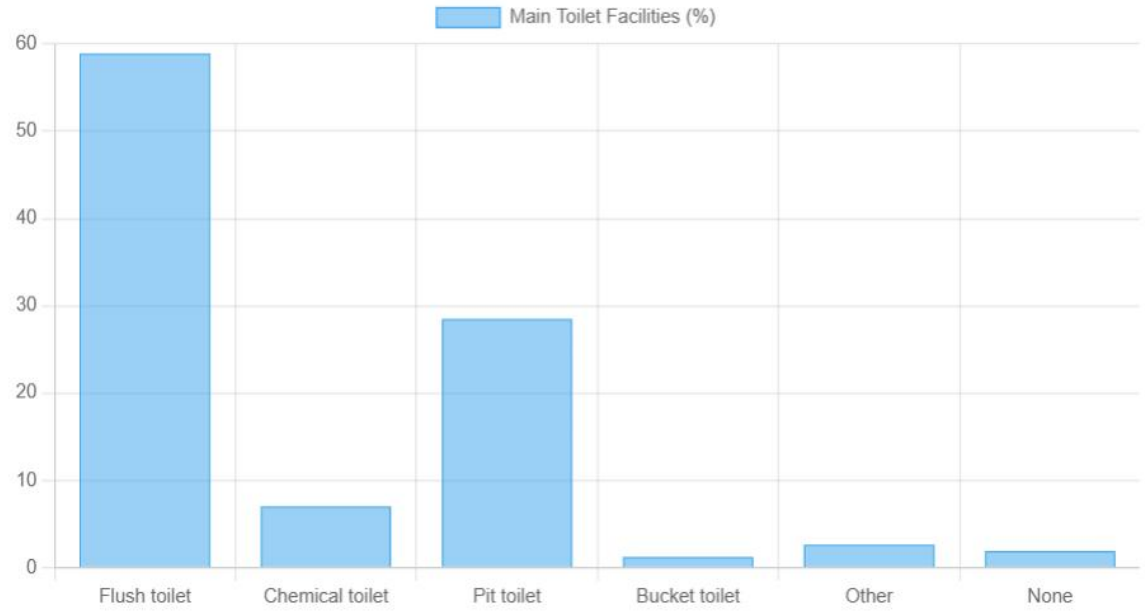
Major water provision challenges still exist within the municipality, with the Water Services Development Plan indicating a total estimated 160 172HH (75%) with a direct backlog in water supply, however it should also be interpreted as households with unreliable water supply which still means that these households do not receive adequate services.

5.2 Target 2

Target **6.2**: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations. This section intends to unpack the application of indicator 6.2.1 and how far the Msunduzi Municipality has tried to reach this indicator.

5.2.1 Safely Managed Sanitation Services in Msunduzi Municipality

In Msunduzi Municipality, there has been significant progress towards this goal; however, with critical obstacles reflecting issues with broader infrastructure and service delivery, which is a common issue amongst many municipalities in South Africa. However, Statistics South Africa in 2022 published statistics that indicated that the municipality has made progress in addressing the first part of the SDG 6.21 indicator, which refers to the proportion of the population using (a) “safely managed sanitation services”. The graph below illustrates the type of toilet facilities in Msunduzi Municipality.



Graph 1: Main toilet facilities (Stats SA)

The Msunduzi Municipality comprises various types of toilet systems, including flush toilets, chemical toilets, pit toilets, bucket toilets, other systems, and none. Both the table and the graph show that approximately 58.9% of households in Msunduzi Municipality have access to sanitation services that are well connected to the sewerage system, septic tanks, or ventilated improved pit (VIP) latrines, which are considered improved sanitation facilities (Stats SA, 2022). This shows progress in comparison with 45% who were connected to the sewerage system in 2011 (Stats SA, 2022).

5.2.2 Wastewater Treatment Infrastructure

The Msunduzi Municipality does contribute to SDG 6.2 through the adopted Municipal policies and planning tools, such as the Integrated Development Plan (IDP) and Water Services Development Plan (WSDP). The municipality is partnered with UMngeni-UThukela Water for the provision of bulk water supply and the Wastewater Treatment Plant.

According to Msunduzi IDP (2025-26), the municipality is to provide support for sanitation services through wastewater treatment plants, including:

- Darvill Wastewater Treatment Plant (capacity ~120ML/day)
- Lynnfield Park Waste Treatment Plant (smaller facility)

These treatment plants treat sewage before it is released into the environment, which helps meet the “safely managed” sanitation requirement of SDG 6.2.

According to the Msunduzi IDP (2025–2026), it is estimated that 13,208 households (6%) have a direct backlog in sanitation services. When the 41,713 households requiring VIP pit emptying are included, the proportion of inadequate sanitation services increases to 26%.

LM	Urban / Rural	2023/2024	
		Sanitation backlog HH	Sanitation backlog Population
Msunduzi	Rural	11 814	45 003
Msunduzi	Urban	1 394	5 310

Figure 9: Sanitation backlog/ Household (Msunduzi IDP 2024/2025)

The IDP indicates that WSA delivers water and sanitation services to schools, tertiary institutions, clinics, and hospitals as part of its water provision services to its urban and rural customers. The municipality currently only records or monitors the provision of services to these institutions in the urban areas. Moreover, infrastructure for both water supply and sanitation are centered around the main urban nodes of the Greater Edendale and Pietermaritzburg. Thus, the infrastructure has been expanded in these areas to cater to urbanization and growth of the city; however, this has subjected the rural communities such as Vulindlela.

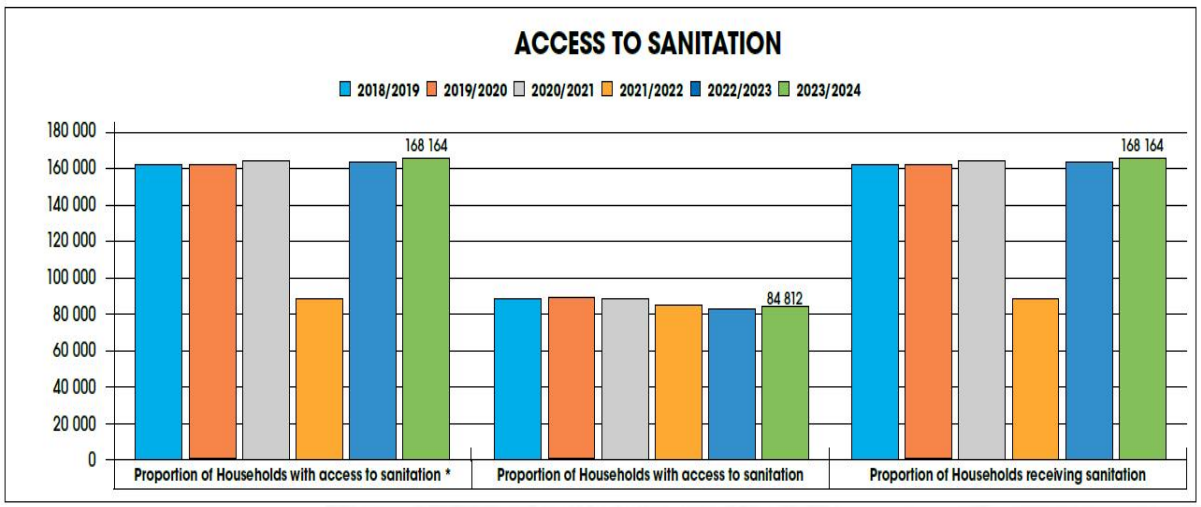


Figure 9: Access to sanitation

Some of the challenges that affect the sanitation in the municipality are that the infrastructure around Msunduzi is old and needs replacement. Significant infrastructure needs to be upsized so that expansion of the network on the periphery can take place. The Greater Edendale area is only partially served with waterborne reticulation. Large areas are served by conservancy tanks and a mixture of VIP's and pit latrines. Ward 39 was recently added to the Msunduzi Water Services Authority area, as a separate Master Plan was completed back in 2018. The area is not well served with water, with reliance on borehole water and VIP's, pit latrines as sanitation. To serve all areas of Ward 39 with treated water from Vulindlela will require extensive pipe laying and reservoir construction. VIP's will be the only form of sanitation for the foreseeable future.

5.2.3 Monitoring of water quality

UMngeni-UThukela Water monitors the raw water and potable water supplied to its bulk consumers, including the WSA, whereas the WSA monitors the potable water supplied to end consumers. The Water Board has its own SANAS accredited laboratory for sample analysis and scientific services personnel that are qualified and experienced. Additionally, they have the necessary tools and equipment as well as technical, operational, engineering staff to maintains its systems. Annual report

All potable and wastewater sampling and analysis are undertaken in accordance with an ISO 9001 certified monitoring programme and SANAS 17025-accredited laboratory methods. Information on water quality performance is regularly conveyed to customers, stakeholders and regulators in accordance with the organisational stakeholder communication plan. The two WTWs that supply the Msunduzi, Midmar WTW and DV Harris WTW, are owned and operated by the water board and are assessed during the Blue Drop evaluation process. The 2023 National Blue Drop report indicated that excellent technical site assessment scores (95%) were achieved for the Midmar WTW, with a total Blue Drop score of 96.44%.

5.2.4 Challenges of achieving SDG 6.2.1b

There is limited data for this SDG 6.2.1b

- The rapid population growth in the Msunduzi LM increases water demands and sanitation services, while the infrastructure upgrades and expansion lag behind population growth, leaving communities under-served.
- Leaks, burst pipes, and damaged infrastructure lead to water losses and supply interruptions.
- Some communities experience water interruptions or low pressure, particularly in informal settlements.

5.3 Target 3

Target **6.3:** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally. To achieve this target, the SDG has set indicators 6.3.1 & 6.3.2 to measure whether the municipality is in good standing toward this goal. The following indicators are as follows:

6.3.1 Proportion of domestic and industrial wastewater flow safely treated

6.3.2 Proportion of bodies of water with good ambient water quality

5.3.1 Domestic and Industrial Wastewater Flow Safely Treated in Msunduzi Municipality

The Msunduzi Municipality, in partnership with UMngeni-UThukela Water, uses the Darvill Wastewater Treatment Works and Lynnfield Park WWTP to treat wastewater from the general public and industry. The Darvill Wastewater Treatment Works (WWTW) is the main treatment facility for the municipality, which has recently been upgraded, allowing the municipality to better function in water treatment. The Department of Water and Sanitation, through its entities, has recently completed upgrading the Darvill Wastewater Treatment Plant (WWTP), which will treat domestic and industrial sewage from areas within Msunduzi Municipality jurisdiction from a treatment capacity of 65 mega litres per day to 100 mega litres per day.

As mentioned above, the Municipality is able to treat wastewater before it is discharged to the environment. Reducing excessive pollution to the environment and the Msunduzi River System. In so doing, there will be an improved water quality in rivers and downstream, which ensures the protection of aquatic habitat and an increasing percentage of wastewater that is safely treated.

5.3.2 Good ambient Water Quality in Msunduzi Municipality (SDG 6.3.2)

The SDG indicator 6.3.2 measures the proportion of water bodies with good ambient water quality. This means that rivers, dams, and wetlands must meet acceptable standards for parameters such as bacteria levels, oxygen levels, nutrients, and chemical pollution to support the ecosystem and safe human use. Therefore, it is important to note that in Msunduzi Municipality, ambient water quality primarily reflects the ecological condition of the Msunduzi River and its connected water bodies. In addition, the Msunduzi Municipality is currently working on several projects, including Msunduzi River Rehabilitation (Duzi River) and Telkom Stream, which seeks to rehabilitate the rivers to improve the water quality and protect the environment.

The municipality is working with environmental organisations and the government to manage Msunduzi River catchment through activities such as river clean campaigns, environmental awareness campaigns, and monitoring pollution sources such as aquatic ecosystems, and maintain healthy water bodies.

This Darvill Wastewater Treatment Works is considered the first kind of innovation and ground-breaking project that has encompassed a pilot wastewater recycling plant. Thus, it will result in the treatment of wastewater to drinking water quality standards, and it has an element of electricity co-generation capacity element.

5.3.3 Challenges Affecting Ambient Water Quality

Despite the measures in place by the municipality to improve water quality, number of challenges affecting Msunduzi River systems. These include studies that identified elevated E. coli levels in sections of the Msunduzi River, suggesting contamination originating from sewage leaks and other pollution sources (Earthnews, 2023). This was the result taken during one of the Triple-P (Partners, People and Planet) and an organization that helps to tackle environmental challenges, and Trans-Caledon Tunnel Authority (TCTA), that are state owned entity that implements bulk infrastructure projects, which took the samples from the river. In those studies, it was found that E. coli levels were 400 times higher than acceptable levels, posing a health risk. Moreover, it was found that there are low oxygen levels (48%) in the Msunduzi River, which is very poor, because a healthy river's oxygen levels should be 90% (The Eyewitness, 2023). The above studies show that pollution from urban development and failing sewer infrastructure has caused a decline in river water quality over time. Thus, improving the ambient water quality remains a significant challenge within Msunduzi Municipality.

5.4 Target 4

Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

5.4.1 Regional water source

Msunduzi's potable water is supplied mainly from the uMngeni River system, including dams such as Midmar and Inanda, which are treated by the uMngeni-uThukela Water Board and then distributed to municipal reservoirs. The bulk water supplier has had to introduce curtailments and limit abstraction to remain within licensed withdrawal volumes.

Municipal demand has at times exceeded the allowable abstraction limits, forcing supply reductions to Msunduzi.

The primary surface water source in the WSA is the Midmar Dam, located on the uMngeni River which also has the Albert Falls Dam, Nagle Dam and Inanda Dam. The Midmar Dam is the water source for both the Midmar WTW and via a canal, the DV Harris WTW. There are groundwater abstractions that are used in rural areas for domestic and agricultural purposes. Ncwadi is a stand-alone scheme primarily supplied via local springs and boreholes however, at times this supply is insufficient and is augmented by water tankers.

5.4.2 Change in Water-Use Efficiency Over Time

Water-use efficiency reflects how effectively water withdrawn from sources is used for productive or municipal purposes. Recent situation in Msunduzi (2023–2024 financial Year) highlighted a dire situation with a recorded 25.4% average water losses and for non-revenue water is at 43.8%. Non-revenue water includes leakages, illegal connections, metering inaccuracies, and water that is supplied but not billed. High non-revenue water significantly reduces the effective availability of freshwater resources for consumers.

Msunduzi Annual Financial Statements (2024) further indicate that total material water loss is 17,190,268 kilolitres (kl) during the 2023/2024 financial year. While the total water loss percentage is 21.62 %, based on national norms and standards for water loss reporting.

Key drivers of low efficiency include ageing infrastructure and burst pipes, delayed leak repairs and maintenance, illegal connections and unmetered use, and Staff shortages and management capacity issues. These inefficiencies mean that a large portion of withdrawn water never reaches consumers, lowering effective water-use efficiency.

5.4.3 Measures to Improve Water-Use Efficiency

The annual report outlines several initiatives aimed at improving water-use efficiency and reducing losses. These interventions are intended to reduce water wastage and improve the municipality's water-use efficiency.

a) Metering and billing improvements

- 53,395 water meters audited for accuracy.
- 5,064 water meters replaced to improve billing and reduce estimation errors.

b) Leak detection and infrastructure maintenance

- 1,721 burst pipes repaired during the 2023/24 financial year.
- Implementation of pressure-reduction and leak-detection programmes to limit physical water losses.

c) Non-revenue water reduction strategies

- Pressure-reducing valves optimisation.
- Reservoir inspections and control valve adjustments.
- Removal of illegal or bypassed meter connections.

Implications for Water Stress and Scarcity through the Municipal annual report shows that water scarcity in Msunduzi is largely driven by inefficiencies in water distribution rather than absolute shortages of water resources. Key implications include:

- High levels of non-revenue water reduce the effective availability of freshwater resources.
- Infrastructure failures increase the volume of freshwater withdrawn but not effectively used.
- Limited financial and technical capacity reduces the municipality's ability to manage water demand and infrastructure maintenance.

As a result, even when water is abstracted from the uMngeni river system, a significant portion is lost before reaching consumers, increasing water stress on the catchment and municipal supply system.

5.4.4 Threats to a sustainable water resource management

a) Freshwater Scarcity Drivers in Msunduzi

Water scarcity in the municipality results from a combination of physical and management factors:

- High system losses
- Infrastructure deterioration: Old pipelines and frequent bursts cause significant water wastage.
- Population growth and demand: Expanding urban areas increase demand faster than infrastructure upgrades.

- Catchment-level supply constraints: Abstraction limits from the uMngeni River system require municipalities to reduce consumption when demand exceeds sustainable supply.

b) Overall Assessment of Water Scarcity

Water scarcity in Msunduzi is primarily “economic and management scarcity” rather than absolute hydro-logical scarcity. Key points to water scarcity:

- The region still receives water from major dam systems.
- However, withdrawal restrictions and curtailments show rising pressure on available resources.
- Low water-use efficiency and high losses intensify water stress, making scarcity worse than the natural supply alone would suggest.
- Freshwater withdrawal pressure on the uMngeni River catchment indicates moderate–high water stress.
- Water-use efficiency remains low, with significant non-revenue water (often >40%).
- Infrastructure failure, leakages, and management constraints significantly reduce effective water availability.

c) Water Scarcity and Water Use in Msunduzi Municipality

The annual report also states that the municipality is operating with a “fractured service delivery engine” due to financial constraints and shortages of technical staff, which affects the efficiency of water supply management and infrastructure maintenance.

These losses occurred due to several operational challenges, including:

- Delays in repairing leaks and burst pipes.
- Shortages of materials needed for infrastructure maintenance.
- Infrastructure damage caused by heavy rainfall.
- Reduced reservoir capacity due to pipe bursts.

6. Best practice projects

The construction of Spring Grove Dam (completed in 2023, located in the Mooi River catchment) brought the uMngeni System back into balance, albeit for a short period. As the water demands and system losses continued to increase with growth and urbanisation, the system fell into a deficit again. This deficit could extend for some time if the management of water resources and water losses, during the current deficit period, are not carefully

practiced. Approximately, 200 Mℓ/day of water is supplied over and above the system yield of just under 1100 Mℓ/day at a 1 in 100-year assurance level (uMngeni Water Infrastructure Master Plan, Volume 2, 2023). WDP

The uMngeni Water and Department of Water and Sanitation are currently implementing the Upper uMkhomazi Water Project which aims to augment supply in the uMngeni Bulk Supply System. The expected completion however will be in the year 2035. The project is set to increase the amount of raw water in the uMngeni Water System yield by 55%, from 394 to 608 million cubic metres (or kilolitres) per annum4. WDP

The municipality has applied for Budget Facility for Infrastructure (BFI) on the Msunduzi Water and Sanitation Infrastructure Upgrade (MWSIU) Programme. The MWSIU Programme is a water and sanitation project to supply combined 226 329 people with water and sanitation in Willowfountain, parts of Vulindlela and Shenstone improving capacity through water infrastructure upgrades. The Msunduzi Annual Report 2024/2025 notes that the budget for the 6 planning studies was approved under the Regional Bulk Infrastructure Grant (RBIG), and the consultants are busy with the finalization of the planning phase. Annual report

Msunduzi Municipality experiences a high-water demand, driven largely by its rapidly growing population. This has led to Department of Water and Sanitation and UMngeni-UThukela Water having set a way to address water challenges in the uMgungundlovu District Municipality. This was done through the upgrade of the Vulindlela Bulk Water Supply Scheme to improve the availability of and supply of good quality drinking water to the communities, including the rural communities in the Vulindlela Area in Ward 39.

The Vulindlela Bulk Water Supply Scheme is considered as one of the successful projects post 1994, and situated in rural communities known as Vulindlela, west of Pietermaritzburg. The initial Bulk Water Supply Scheme was constructed in 1998 and was subsequently fully operational following its adoption as a National Presidential Lead Project. The upgrading of the bulk water scheme is a result of population growth in Vulindlela over the past decade, as well as an increase in municipal demand for water.

Projects like Copesville water scheme phase 3 demonstrate the commitment of Msunduzi Municipality towards SDG 6. These projects are critical towards making meaningful strides towards universal access to water and sanitation.

7. Key constraints towards water and sanitation

Ageing infrastructure is a key challenge for Msunduzi Water. Real losses in 2017/18 accounted for 32% of bulk water purchases. Such losses were only marginally fewer in 2018/19 at 30%. Approximately 65% of the Municipality's operational expenditure for water is made up of bulk water purchases from Umgeni Water, which leaves little for spending on water asset maintenance after other costs such as depreciation and departmental charges are subtracted from the remaining 35%.

A comprehensive water conservation and water demand management plan for the next five years has been completed and is being actively worked upon with the funds allocated, but more funding will need to be allocated to operating expenditure in order to bring down this real loss percentage. Of course, this wastage has a direct impact on the municipality's raw water resources (the Midmar and Spring Grove dams), which are already oversubscribed, and the water demand growths of the Msunduzi Municipality and of eThekwini Metro will exacerbate the situation in years to come.

In 2024, UMngeni-UThukela Water was directed by the Department of Water and Sanitation to ensure water abstraction from the Midmar Dam remains within its licensed allocation. This means that there will not be any additional water source availability to supply the Msunduzi growing demands.

Municipal annual WSDP Performance Water Services Audit Report 2023/2024 indicated physical water loss amounted to an estimated 44.84Mℓ/d and the non-physical or apparent water loss amounted to an estimated 10.52Mℓ/d. Other losses include reservoir and user connection leaks or illegal connections. The total estimated Non-Revenue Water (NRW) equated to 95.44Mℓ/d (43.8% of SIV). This is high considering to the international benchmark of 32% (which is still higher compared to efficient-performing utilities that have less than 10% NRW). To illustrate the potential loss in revenue, only considering physical losses' (44.84Mℓ/d) sales forfeiture, at R35.021 per kilolitre (kl) of retail water that could be sold, amounts to R1.57mil per day, or R573.12 million per annum. The municipality has 97 479 (53% of connections) unmetered consumers. This may result in tremendous uncertainty on water supplied and consumed (thus also accounted for and ensuring reliable services).

8. Recommendations

The growing population has placed a strain on the current water infrastructure across the entire municipality. The aging infrastructure and associated non-revenue water loss further elevates the discourse on water sustainability and efficiency in governance systems. The performance of the municipality and the furtherance of SDG have revealed key successes that the municipality must amplify and critical challenges that must be tackled with a strategic outlook of improving water access and sustainability.

Financial investment towards key water infrastructure projects and systems is vital to the continuous drive of sustainable human settlement. There is a gap between the infrastructure required to maintain a sustainable water system and the investments directed towards maintenance and construction projects. The municipality must endeavour to source funding from potential donors or institutions inclined to support the advancement of SDG 6 to supplement currently limited municipal financial model.

Coordination in planning between the infrastructure service, human settlements and town planning units has become more vital with the rapid pace of urbanisation, informal development and rural settlements expansion that is currently being experienced. Population growth as a catalyst for urbanisation has resulted in increased demand for water and sanitation facilities and ineffective coordination between these critical departments can hinder the efficient provision of critical infrastructure. Alignment of strategic plans, projects

and resources must be at the centre of service delivery model to counter the growing informality and demand experienced with the municipality's jurisdiction.

Continuous enforcement of water and sanitation regulation must become a key priority as the increase in illegal connections and non-payment of service levies is on the rise. The gap between infrastructure investments and revenue generated by the municipality has impacted the rate at which the municipality can re-invest or undertake financial commitments towards the provision of universal access to water and sanitation services. The non-revenue water loss presents a consistent and considerable threat to the overall sustainability of the water and sanitation system, and penalties must be levied against individuals circumventing the municipal processes at the detriment of the law-abiding communities.

Public awareness and engagement can be a vital tool towards forging effective government and public partnership in the advancement of SDG 6. The dissemination and availability of information on water conservation is critical to securing a consumer base participation towards water sustainability. Formulation of consumer incentives programmes towards active participation in water conservation and support can stimulate community discourse towards improving the current public contribution to water and sanitation programmes.

9. Conclusion

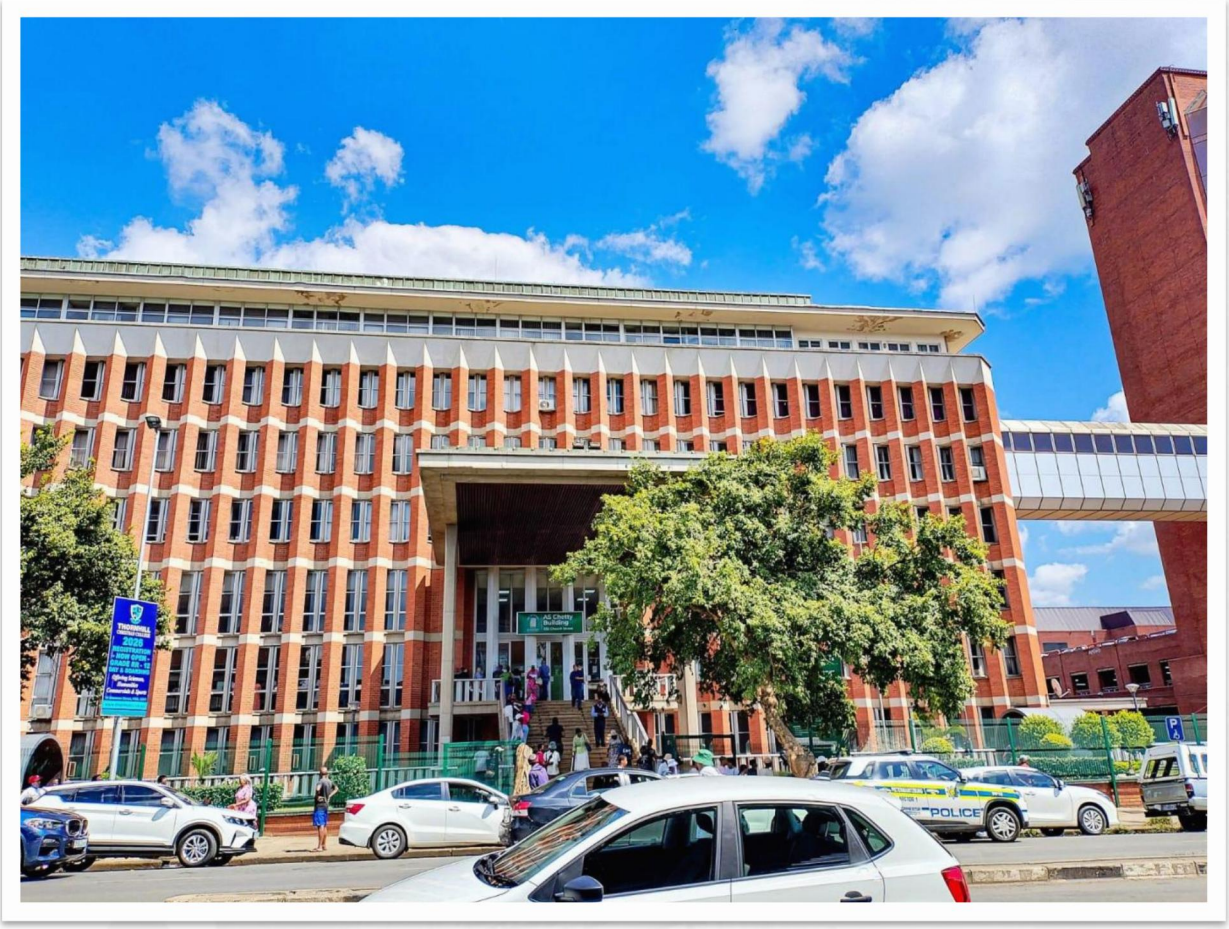
SDG 6 provides a critical measurement to the prosperity of local governments and the continuous drive towards universal access of water and the need to protect the water resources is critical to the overall valuation of water provision. Water and sanitation are critical services to every well managed settlement and key to social cohesion of communities. The advancements towards improved water and sanitation systems must be a joint venture between the government and its communities, this partnership is significant to the realization of SDG 6.

The continuous review of the municipal performance on the SGD progression is vital to the improved service delivery across communities. The evaluation of the municipal performance in water and sanitation provision highlighted an upward trend in household access to water and sanitation, however key constraints across the service delivery value chain present hindrances to the municipal objectives of universal access. It is imperative that the designed approaches encompassing programmes and projects that are responsive and cognizant of the communities needs.

10. Reference

- Msunduzi Local Municipality: Annual WSDP Performance Water Services Audit Report 2023/2024
- Msunduzi Local Municipality, Water Services Development Plan IDP Water Sector Input Report 2023/2024
- Msunduzi Local Municipality, The Msunduzi Annual Report 2024/2025
- Sustainable Development Goals Country Report 2023, South Africa
- Msunduzi Local Municipality, Municipal Spatial Development Framework 2022
- Statistics South Africa, Census data, 2022.

Annexures

1.Council resolution of the participation on SDG Support Programme Phase 2

2. Record stakeholder engagement