



VOLUNTARY LOCAL REVIEW Baseline Report

A review of the implementation of the
Sustainable Development Goals
in the City of Tshwane Metropolitan Municipality



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City of Tshwane May 2024



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List of acronyms and abbreviations

Acronym	Meaning
AIDS	Acquired Immunity Deficiency Syndrome
C40	C40 Cities Climate Leadership Group
CBD	Central Business District
CO ₂ e	Carbon dioxide equivalents
COSUP	Community Oriented Substance Use Programme
CSIR	Council for Scientific and Industrial Research
DBSA	Development Bank of Southern Africa
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
MoA	Memorandum of Agreement
MoU	Memorandum of Understanding
NPO	Non-profit organisation
NSG	National School of Government
SDG	Sustainable Development Goal
Stats SA	Statistics South Africa
STIs	Sexually transmitted infections
TB	Tuberculosis
The City	City of Tshwane Metropolitan Municipality
Tshwane	The geographical area over which the City has jurisdiction
UN	United Nations
VLR	Voluntary Local Review

Foreword by the Executive Mayor

I have consciously led the City of Tshwane to join the movement to submit the Voluntary Local Review (VLR) as a way of communicating local progress on the City's priorities and strategic objectives in an honest and transparent manner.

The City is proud to submit its first baseline report that will become a VLR, which will contribute towards South Africa's Voluntary National Review. This baseline report is a summary of the City's status on Sustainable Development Goal (SDG) progress, a road map of the City's alignment with the SDGs and targets, and an overview of the City's sustainable development approach.

The City's conscious effort to improve the lives and living conditions of Tshwane residents is evidenced by the various programmes implemented to drive the provision of sustainable quality basic services, as well as growth and development that are aligned to the objectives of all the SDGs. There are multiple long-term benefits for the City to invest in the dimensions of sustainable development to achieve social justice, ecological safety and economic efficiency while pursuing its key mandate of service delivery.

The alignment of the City's service delivery and development strategies to the 2030 Global Agenda is further given expression by the adoption of a sustainability programme. Acknowledging the importance of the SDGs, the City demonstrated its commitment by participating in the localisation of the SDGs through submitting its baseline report as part of the VLR.

It is with experience that we come to realise the key role of the city as the only platform where the country will be able to win or lose the battles relating to sustainable development, inclusion, equity and resilience. These are some of the transversal agendas that are very transformative, have the potential to carry out the service delivery actions needed by communities and will strengthen global cooperation and solidarity.

The City has realised its role as the frontline respondent to address pertinent issues and priorities affecting ordinary residents, such as submitting this baseline report lets us become an integral part of the collective agenda with other spheres of government as an effort to contribute to our sustainable development approach. This participation will expedite the effort to reduce hunger, address poverty, address job creation, improve the quality of residents' lives and provide quality service delivery aligned to global standards.

We believe that submitting the first VLR is a demonstration of our efforts and commitment to creating an enabling environment and multilateral system, which encourages key stakeholder engagements in shaping global solutions aligned to local dynamics. It will further ensure the commitment that no one is left behind when structuring the sustainable developmental agenda of the City to be fully entrenched into its operational systems.

It is our belief that introducing the SDG localisation plan will strengthen effective coordination mechanisms and synergies between key stakeholders and residents and will further catalyse the key actions to revitalise our environment and build on for future crises. This baseline report is an expression of the significant contribution the City is making to address the SDGs while delivering municipal services to communities.

The City's participation in the review did not only help with taking stock of the progress made in the efforts geared towards realising the objectives of the SDGs, but it also helped the City to share a story of its journey, identify gaps and highlight challenges that require urgent attention. It also brought about critical lessons that strengthen our resolve to implement a robust programme of inclusive and sustainable development, which while supporting the 2030 Global Agenda, also responds to the immediate needs of Tshwane residents despite the constraints that continuously hinder the attainment of the required progress.

On behalf of all Tshwane residents and other strategic partners that support the City in many ways, I express excitement and glee for the City to form part of the global community's efforts towards sustainable development.



Executive Mayor
Ald Cilliers Brink

Executive summary

The adoption of the 2030 Agenda for Sustainable Development in 2015 by United Nations (UN) member states ushered in an era of global cooperation for development. Halfway through the adoption of the SDGs, the City, like most cities and other stakeholders in the world, acknowledges that not much has happened and much still needs to be done if the achievement of the SDGs were to happen in 2030.

Achieving these global development goals in the City remains a significant challenge. Several and compounding challenges, including coping with the aftermath of the COVID-19 pandemic, climate change, financial constraints, inadequate or underinvestment in infrastructure that supports growth and development, general economic decline due to misaligned macro-economic policies and limited capacity of stakeholders to deliver on SDGs, among many others, have hindered and even reversed gains made in achieving the SDGs in cities like Tshwane.

The challenges referenced above expose and exacerbate the existing key vulnerabilities and inequalities contributing to the poor progress on achieving SDGs in cities, thus contributing to “leaving many people behind”. The problem has been that a lot of work has focused on anthropocentric Marxism, especially concentrating at the intersection of ecological and socio-economic inequalities as a critique of the economic inequality of cities, rather than the broader ecological sustainability of cities.

Considering this slow progress, the City acknowledges that it must double its efforts and take bold and urgent actions to accelerate progress towards achieving the SDGs. It is further acknowledged that innovative solutions and cooperation between different levels of government, civil society and the private sector must be strengthened to overcome the complexity and interconnectedness of the challenges hindering the achievement of progress towards realising the goals.

The city of Shimokawa (Japan) and the Shimokawa Method for Voluntary Local Review defines voluntary local review as a process whereby local and regional governments voluntarily carry out a review of progress made in implementing the 2030 Agenda and its selected SDGs. The review includes key initiatives, best case studies, policies, programmes, projects, data, institutional setups and stakeholder engagement mechanisms to implement the UN Agenda 2030 at local city level. The outcomes of the review are then developed into follow-up action plans. To this end, the City is participating in a VLR pilot and getting capacity from key global and local stakeholders which will assist in raising capacity towards implementing and achieving the SDGs.

Against this background, this report presents the progress made, other critical milestones achieved and steps taken by the City in localising the SDGs and implementing interventions that support the localisation of the SDGs. Some of the interventions that the City continues to implement are proving to be most relevant and play a critical role in driving progress towards realising the goals. Despite the challenges that hinder progress in achieving the SDGs, the City has made notable strides. In this regard, reasonable progress has been made in institutionalising some mechanisms that support and drive the institutionalisation of the SDGs in the business operations of the City. One of the commendable strides made comprises the development and implementation of a suite of guiding instruments in the form of by-laws, policies, frameworks, strategies and issue-specific plans.



The location in the City's institutional form of a dedicated unit given a mandate to drive and institutionalise the sustainability agenda in the business of the City is a noteworthy political undertaking. In this regard, the City is now making good strides in streamlining and implementing a strong climate-resilient programme in the mainstream business of the City. Currently, the City is also institutionalising climate-resilient planning and budgeting. This initiative will ensure that the consideration of climate change becomes central in the planning, budgeting and implementation processes undertaken by the City.

Furthermore, other interventions implemented by the City include the development of the sustainable infrastructure necessary to promote and broaden access to various services in the form of water, sanitation, electricity, roads and transport, to mention just a few. This focus on sustainable infrastructure development contributes significantly to the required progress to achieve many of the SDGs.

Going forward, the City will –

- continue with its efforts of integrating the SDGs in its plans and implementing its programmes and interventions that support the achievement of sustainable development;
- continue tracking progress on the implementation of the interventions that contribute to the goals;
- conduct its own ongoing reviews outside the VLR process timelines or intervals; and
- participate in the VLRs.

Having observed the criticality of partnerships, the City will continue pursuing mutual beneficial partnerships with private and public organisations and individuals, both locally and internationally. The City is open to mutual beneficial partnerships with partners that share the same commitment to sustainable development. The City believes that all these efforts will advance the localisation of the SDGs and accelerate progress towards achieving the goals.

Highlights of the report

In its quest to deliver the ambitious promises made by the 2030 Global Agenda in the Tshwane locality, the City implemented various interventions, which at the first participation in the VLR are at different progress levels, with some notable success towards the realisation of some of the goals and derailed progress in some of the interventions. Notwithstanding the many challenges experienced, the City made significant progress in implementing the SDGs.

Some of the notable strides made include the establishment of institutional arrangements for driving and coordinating the mainstreaming of sustainability in the strategic planning, programming and service delivery processes of the City. This has brought about a dedicated focus on promoting actions that support the implementation of the SDGs in the critical and strategic business undertakings of the City. The City has also made commendable progress in developing a suite of instruments that promote governance and guide the operations of the City towards the realisation of the aspirations of the Global Agenda outlined in the various SDGs. In this regard,



various legislation (by-laws), policies, strategies and plans that promote actions that centralise sustainability were developed and implemented progressively.

Significant strides were also made in securing partnerships for development. In acknowledging that impactful growth and development as well as effectiveness in delivering sustainable development can be achieved through establishing good relations and partnerships with various partners and stakeholders, the City established beneficial relations and partnerships with domestic and international partners and stakeholders. These partnerships brought to the City much-needed resources, expertise and networks that have contributed significantly in delivering the progress recorded in this report in various areas of the business of the City.

One of the greatest highlights is the adoption of inclusive, consultative and participatory governance which augurs well with the VLR mantra of “leaving no one behind”. The efforts of embedding inclusive governance strengthened collaboration, shared ownership, transparency and accountability, which are the key levers of sustainable development.

Disclaimer

In conducting the review and developing the VLR report, the City made efforts to promote the reliability (accuracy, completeness and validity) of data, especially in the processes of data gathering and analysis. Despite these efforts, it is difficult for the City to assure the readers or users of this report about the complete reliability of the information or data used in this report.

Readers or users are deemed to have waived and renounced all their rights to any claim against the City, its entities and all its officials for any experience of any nature arising out of the use of or reliance on the data or information presented in this report. Information or data used in the review and the report is presented as it was at the time of conducting the review and writing the report (latest May 2024).

However, the City welcomes comments on the data or information in the report itself. This is to improve the next iteration of the VLR report. Comments can be sent to **Stanley Blessings Nyanyirai – Director Strategy and Research Development.**
Email: - stanleyny@tshwane.gov.za



Notes to and limitations on the report

The main limitation of the report is the lack of data availability in certain aspects of the selected goals to support the review and conduct an objective assessment of progress made in the implementation of the SDGs through their indicators.

Issues of non-availability of credible and reliable data in some of the selected SDGs impacted negatively on the review of all the selected goals. As a result, the City chose to focus on SDGs where, at the time of conducting the review and writing the report, there were reasonably complete sets of data points and where available data in such instances had some level of integrity to support the review process adequately.

One of the requirements of the United Nations Statistical Commission (UNSC) on SDG localisation through VLRs is disaggregation of data sets. The limited nature and lack of disaggregated data sets is one of the key limitations of this report which will be improved in the next iteration of the VLR report.

Like most cities, the City also started late in engaging with the VLR process, which compounded the challenge of the completeness of the data and information used in the report. Due to limited human resources levels in the City, it is noted that there was limited capacity to undertake the review and develop the VLR report in the City, a challenge further compounded by the limited duration of the pilot to review and develop the VLR report.

While reference is made to some milestones achieved more than five years back, in the main, the data or information used in reviewing the progress on the implementation of the SDGs in the City and developing the report covers the period between 2018 and 2023.

Information or data used in this baseline report is presented as of May 2024. As data points are in a constant state of movement, the sets of data beyond May 2024 could have made the figures in the report obsolete in many aspects.

Acknowledgements

The City is extremely grateful to the political leadership and management of the City for their unwavering support, which played a pivotal role in the successful realisation of this VLR. The development of the City VLR report would not have been possible without the inputs made by various City officials who provided content for the review and contributed to the write-up of the various sections of the report.

In a special way, appreciation is extended to officials in the City Strategy and Organisational Performance Department (Siphumeze Cwayi and Stanley Nyanyirai) and the City Sustainability Division (Dolly S Mafa) in the Office of the Executive Mayor who coordinated the review process and wrote the report. The various contributions by colleagues in the City is hereby fully acknowledged. Of special mention are Pheladi G Phasha and Refilwe Nyathi.

The support given by South African government sector departments to the City is appreciated, especially Statistics South Africa (Stats SA), which played a key role in guidance on key data issues and overall support with regard to the selection of SDGs,



their targets and corresponding indicators for consideration in the review process based on data availability and credibility. The Planning Commission in the Department of Planning, Monitoring and Evaluation, which is part of the Presidency, played a coordination role for the City and other cities during the VLR pilot.

The City also appreciates the contribution made by external stakeholders in the form of the private sector, non-governmental organisations and civil society organisations who participated in and contributed to the review process and assisted in providing comments that led to the refinement of the report. This assisted in guiding the review process on the principle of “leaving no one behind”.

The technical support and guidance provided by the South African Local Government Association and the United Nations Department of Economic and Social Affairs (UNDESA) is greatly appreciated as they supported the City and provided the best advice on the VLR process. This active and enthusiastic support enriched the VLR process significantly and promoted the in-depth work of the City team and the relevance of the pilot.

The City extends its gratitude to and acknowledges the role played by African Monitor in co-planning, resourcing and facilitating the Tshwane SDGs External Stakeholder Workshop, which was a key requirement of the localisation of the SDGs through VLRs.

Capacity-building and institutional structure: Towards the Voluntary Local Review process in Tshwane

As a demonstration of its commitment to the Global Agenda on Sustainable Development, the South African government coordinated the participation of South African municipalities in the 2023/24 VLR process. In this regard, the City, together with other municipalities in South Africa, was identified by the Department of Planning, Monitoring and Evaluation, South African Local Government Association, United Nations Department of Economic and Social Affairs (UNDESA) and United Nations Development Programme (UNDP) and accepted to participate voluntarily in the 2024 pilot for the localisation of the SDGs through VLRs. This led to these municipalities joining the global community of cities and other organisations to localise SDGs through VLRs.

In 2018, the City appointed a team of five people to coordinate and facilitate the work related to the SDG baseline reporting, which was reconstituted as nine people to lead the write-up of the VLR in 2024. In line with the City of New York VLR model, the Executive Mayor is the political champion and the City Manager is the administrative champion of the SDG localisation work. Two City departments, namely the City Strategy and Organisational Performance Department in the Office of the City Manager Cluster and the City Sustainability Division in the Office of the Executive Mayor provided overall project management of the VLR process.

In the 2023/24 SDG review cycle, the City participated for the first time in conducting the VLR process and developing a VLR report. The report is meant to give an account of the progress made by the City in implementing programmes towards achieving a suite of selected SDGs. The City chose to only report on seven of the 17 SDGs. This decision to select seven goals was informed by several factors, with the chief among



them being the availability of credible data and information necessary to conduct an objective VLR versus the commitments of the City that link to the selected SDGs.

Mapping next steps in consideration of the recently concluded Voluntary Local Review process

In consideration of the lessons learnt and key insights acquired out of the recently concluded VLR review process in the City and in terms of what is potentially the single most important aspect of the process – improving the overall performance of the City – has an intention of deeply embedding the City's word on the SDGs. This is done to challenge the City not to follow a business-as-usual route, but one of sustainability and resilience. A decision has been taken to better coordinate continuous tracking (monitoring and reporting) of the SDG implementation at City level so that insights obtained during the baseline report are consolidated.

One of the key initiatives that the City will champion is to enhance continuous implementation, monitoring and reporting on the selected SDG indicators by leveraging off the recently approved Enterprise Data Architecture Policy and Framework whereby dashboards are developed on the SAP system to map, store, record and pilot the tracking of reported City administrative data and targets centrally and corporately. In a way, the City will strengthen the closing of data management gaps that have been highlighted by its participation in the SDG localisation process through the VLR.

Currently, the City has a fully functional Climate Action Focal Points Committee which is used to coordinate climate change interventions within line function departments. Using ten outcomes of the City of Tshwane Climate Action Plan and the need not to duplicate structures, a relationship has been established with this structure to support SDG coordination efforts in the future where the Climate Action Focal Points will form part of the SDG Champions. Identified SDG Champions in the line function departments will be used for content coordination in the review process and raising awareness of SDGs in the City. The City Manager will be assigned to lead the localisation process of the SDGs administratively. In conclusion, the institutional arrangements need to be formalised leveraging off experience gained.

The City will also use the localisation of the SDGS through the VLR to better galvanise its efforts of making partnerships (raising friends) and managing the resultant key relationships formed further from its current efforts. Given the multiplicity of the partnerships the City currently has, it will leverage off the SDGs in structuring more intentional partnership arrangements drawn from other cities, academia and research institutions, civic society organisations and business sector partners to enhance the institutionalisation of the SDGs in Tshwane for higher and better outcomes.

Building on the above paragraph, the City will continuously advocate and better coordinate the implementation and alignment of City plans and execution mechanisms to support the institutionalisation of the SDGs. The alignment of the SDGs and Integrated Development Plan to National Treasury Circular 88 indicators has been brought into sharp focus as actions for the immediate future.

The City will urgently reconstitute a working group to undertake the alignment process for the Integrated Development Plan, SDGs and Circular 88 indicators, work which will



be further deepened and strengthened in the second iteration of the City's SDG localisation through the VLR. The City's Communication, Marketing and Events Department will be instrumental in popularising the decisions and actions taken by the City in reviewing and localising the SDGs through VLRs.



1. Introduction and background: United Nations Agenda 2030 on Sustainable Development Goals

1.1 Global perspective

The adoption of the 2030 Agenda for Sustainable Development and its 17 SDGs by heads of state, governments and high representatives at a meeting in September 2015 in New York was a truly historic moment and a promise to secure the equal rights and well-being of everyone on a healthy, thriving planet.

The agenda has unprecedented scope and significance, embarked on as a collective journey whose trademark is a pledge to leave no one behind. South Africa is a signatory and was part of this moment. It meant that South Africa would participate in the global affairs of pushing the agenda on sustainable development. With the recognition by development practitioners and scholars that the implementation of the SDGs relies significantly on the participation by the level of government closer to the people, municipalities became critical players in promoting the achievement of the sustainable development agenda.

Today, the UN SDG agenda remains the world's roadmap for ending poverty in all its forms and dimensions, protecting the planet and tackling growing inequalities. The 17 SDGs are the cornerstone of the agenda and offer the most practical and effective pathway to tackle the causes of violent conflicts, human rights abuses, climate change and environmental degradation with the aim to ensure that no one is left behind. The SDGs reflect an understanding of the triple bottom line: Sustainable development implemented everywhere in a fashion to integrate economic growth, social well-being and environmental protection.

While a fragile global economy, rising conflicts and the climate crisis emergency have placed the promise of the SDGs in real danger of being achieved, there has been some SDG success since 2015 with improvements in key areas, including poverty reduction, child mortality, electricity access and the battle against certain diseases. Countries continue to supercharge efforts to achieve the SDGs where for the last eight years, countries, civil society and businesses have gathered to showcase the bold actions they are taking to achieve the SDGs.

With just under six years left to achieve the SDGs, world leaders at the SDG summit in September 2019 called for a “Decade of Action” and delivery of sustainable development, pledged to mobilise financing, enhance national implementation and strengthen institutions to achieve the goals by the target date of 2030, while at the same time leaving no one behind.

On 18 and 19 September 2023, the second SDG summit took place, bringing together heads of state, governments and high representatives to catalyse renewed efforts towards accelerating progress on the SDGs. The summit culminated in the adoption of a political declaration to accelerate action to achieve the 17 goals. During the same meeting the UN Secretary-General called on all sectors of society to mobilise for a decade of action on three levels:

- Global action to secure greater leadership
- More resources and smarter solutions for the SDGs



- Local action embedding the needed transitions in the policies, budgets, institutions and regulatory frameworks of governments, cities and local authorities, as well as people action, including by youth, civil society, the media, the private sector, unions, academia and other stakeholders, to generate an unstoppable movement pushing for the required transformations

Numerous civil society leaders and organisations have also called for a “super year of activism” to accelerate progress on the SDGs, urging world leaders to redouble efforts to reach the people furthest behind, support local action and innovation, strengthen data systems and institutions, rebalance the relationship between people and nature, and unlock more financing for sustainable development.

At the core of the 2020–2030 “decade for action” is the need for action to tackle growing poverty, empower women and girls, and address the climate emergency.

1.2 Africa perspective

Agenda 2063, the Africa’s blueprint and master plan for transforming Africa into the global powerhouse of the future was developed to complement and support the UN Agenda 2030. Agenda 2063 is the continent’s strategic framework that aims to deliver on its goal for inclusive and sustainable development and is a concrete manifestation of the pan-African drive for unity, self-determination, freedom, progress and collective prosperity pursued under Pan-Africanism and African renaissance.

The origin of Agenda 2063 was in the realisation by African leaders and her people that there was a need to refocus and reprioritise the continent’s agenda from the struggle against apartheid and colonialism and the attainment of political independence for the continent, which had been the focus of the Organisation of African Unity, the precursor of the African Union, to prioritise inclusive social and economic development, continental and regional integration, democratic governance and peace, and security among other issues aimed at repositioning Africa to becoming a dominant player in the global arena.

African heads of state and governments signed the 50th Anniversary Solemn Declaration during the Golden Jubilee celebrations of the formation of the Organisation of African Unity (African Union) in May 2013 as an affirmation of their commitment to support Africa’s new path for attaining inclusive and sustainable economic growth and development. Among other things, the declaration marked the rededication of Africa towards the attainment of the pan-African vision of an integrated, prosperous and peaceful Africa, driven by its own citizens, representing a dynamic force in the international arena of UN Agenda 2030 and Agenda 2063 as a real manifestation of how the continent intends to achieve this vision within a 50-year period from 2013 to 2063.

Agenda 2063 envisions not only Africa’s aspirations for the future but also identifies key flagship programmes that can boost Africa’s economic growth and development, and lead to the rapid transformation of the continent. Further, Agenda 2063 identifies key activities to be undertaken in its ten-year implementation plans which will ensure that Agenda 2063 delivers both quantitative and qualitative transformational outcomes for Africa’s people.



Several African continental frameworks have been developed to address the development of key sectors, such as agriculture, trade, transport, energy and mining, anchored by the UN agenda on SDGs. These sectors are seen as key in enabling member states of the African Union to achieve their developmental goals. To ensure coherence and convergence, these frameworks have been captured in the priority areas of the First Ten-Year Implementation Plan. The continental frameworks include the Comprehensive African Agricultural Development Programme (CAADP), Programme for Infrastructural Development in Africa (PIDA), African Mining Vision (AMV), Science Technology Innovation Strategy for Africa (STISA), Boosting Intra African Trade (BIAT) and Accelerated Industrial Development for Africa (AIDA), all meant to support the achievement of the UN agenda on SDGs.

1.3 South African perspective

The notion of advancing SDGs in South Africa has recently been assuming great importance in all national, provincial and local policies. South Africa has used the tagline of addressing unemployment, poverty and inequality for her people, underpinned by the “People, Planet, Prosperity, Peace and Partnership” approach to the UN global goals. The national ambitious development trajectory and outcomes are therefore largely understood as a process in which the government aspires to transform society, the economy and the state of the environment all at once.

South Africa’s National Development Plan foregrounds national development outcomes, a set of national targets that serve as markers in the transformation process, inevitably meant to help the realisation of the development outcomes by 2030 in line with the UN agenda on SDGs. In essence, South Africa’s National Development Plan provides the blueprint through which the country hopes to achieve developmental objectives.

Over the past decade, South Africa has been reporting annually on the progress achieved on SDGs through Voluntary National Reviews and participated in the development of and reporting on the African Union Agenda 2063 development indicators.

1.4 Sustainable development as a discourse

Sustainable development has become a widely invoked trademark of local, national and especially international organisations dedicated to promoting environmentally sound approaches to economic growth (Pezzoli, 1997b). Ever since the publication of “Our Common Future”, a report by the World Commission on Environment and Development, understanding of sustainability and sustainable development has increased (Holmberg, 1992; Pezzoli, 1997b). According to Pezzoli (1997b), the increased interest in sustainable development has been further fuelled by the Rio Cluster (the earth and the city summits).

The most widely cited definition of sustainable development was coined by the World Commission on Environment and Development as “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs” (World Commission on Environment and Development, 1987). This definition contains two key concepts, namely the concept of needs, particularly the essential needs of the world’s poor that should be given a paramount priority, and the



idea of limitations imposed by the state of technology and social organisation on the ability of the natural environment to meet present and future needs, according to (Mebratu, 1998).

Debates on urban sustainability have a much longer history. As far back as in the nineteenth century, there was already concern about rapid rates of industrial urban development in Britain, Continental Europe and the United States. For example, in the 1940s the deplorable state of workers in Manchester and increasing segregation of the rich and poor motivated Frederick Engels to write and research on the issues. Early writers too, like Howard, Mumford and Leopold, have long raised the question of urban sustainability in the early twentieth century with regard to the nature of the industrial city and the important relationship between human development and the natural world.

The shift to sustainable development has a clear focus from a purely economic development perspective, which is usually defined as the expansion of production (like the GDP) and consumption to a new view of development which seeks to balance economic, social and environmental development or sustainable development (Mebratu, 1998).

The term “needs” can therefore be considered in the context of aspirations and expectations that nations, regions or communities may have of a development process and how these may be met sustainably (Mebratu, 1998). Sustainable energy development therefore tries to have an effect on some of the improvements in the quality of life. Measures include employment provision, poverty reduction, earning an income and equal access to quality education without exceeding the capacity of the local environment or carrying capacity of the energy system to support it (Goldemberg et al, 1988). This implies that the transition to low-carbon development is put at the centre of sustainable energy development (IEA, 2017).

There is a difference between partial and whole sustainability. Whole sustainability is achieved when the following four key dimensions are met:

- Ecological sustainability: Wise use of the natural capital supplemented by environmental and territorial sustainability. Environmental sustainability refers to the resilience of natural ecosystems used as natural sinks.
- Economic sustainability: The efficiency of economic systems in ensuring a continued socially equitable, quantitative and qualitative progress.
- Social sustainability: Referencing both a cultural and corollary sustainability.
- Political sustainability: National and international governance provided to satisfy an overall framework for development.

1.5 Voluntary Local Review: Adopted definition for this baseline report

The city of Shimokawa (Japan) and the Shimokawa Method for Voluntary Local Review defines voluntary local review as a process whereby local and regional governments voluntarily carry out a review of progress made in implementing the 2030 Agenda and its selected SDGs. The review includes key initiatives, best case studies,



policies, programmes, projects, data, institutional setups and stakeholder engagement mechanisms to implement the UN Agenda 2030 at local city level. The outcomes of the review are then developed into follow-up action plans.

The City is participating in the VLR process pilot and getting capacity from key global and local stakeholders which will assist in raising capacity towards implementing and achieving the SDGs. The City has just conducted an assessment to review its programmes, projects, data, institutional structure and stakeholder engagement mechanisms towards implementing the UN Agenda 2030 at local city level.

VLRs facilitate critical collaboration and cross-coordination across the global goals and has many benefits, including but not limited to engaging in cross-functional areas. Further, the VLR process deepens understanding of organisational processes linked to global goals that are multidisciplinary and complex in nature. The process of aligning to the global development goals spurs cities into thinking about long-term development outcomes and allows for an ongoing review and stocktake of the progress made within the organisation towards meeting longer-term development goals. It also ties cities into a global language that can facilitate new alliances and partnerships. It is a tool to manage a multiplicity of partners for organisations that work across a number of thematic areas. Lastly, it also allows for deeper data reviews to better understand what data is available and where there are reporting gaps.

1.6 About the City of Tshwane

The City of Tshwane is classified as a Category A municipality by the Municipal Demarcation Board, in terms of Section 4 of the Local Government: Municipal Structures Act, 1998 (Act 117 of 1998). The City was established on 5 December 2000 through the integration of various municipalities and councils that had previously served the greater Pretoria regime and surrounding areas. The physical municipal boundary of the City was further amended on 28 May 2008 through a proclamation in the *Government Gazette*, which incorporated the former Metsweding District Municipality, including Nokeng tsa Taemane (Cullinan) and Kungwini (Bronkhorstspuit), into the borders of Tshwane. The incorporation, which gave birth to the new City of Tshwane in May 2011 after the local government elections, was in line with the Gauteng Global City Region Strategy to reduce the number of municipalities in Gauteng by the year 2016.

With the incorporation of the above-mentioned areas, the municipal area covers 6 345 km². The size of Tshwane can be practically explained in that it stretches almost 121 km from east to west and 108 km from north to south, making it the third largest city in the world in terms of land area, after New York and Tokyo/Yokohama. It also makes up more than 30% of Gauteng, which is 19 055 km² in extent. Tshwane is the third largest city district in Gauteng.

The population of Tshwane increased from 2,9 million in 2011 to 4 million in 2022, representing about 6,5% of the South Africa population (Stats SA, 2023). There were just over 1,3 million households in Tshwane in 2022, an increase from 1 million recorded in 2011 (Stats SA, 2023). The average household size in Tshwane decreased from 3,2 persons per household in 2011 to 3,1 persons in 2022 (Stats SA, 2023).

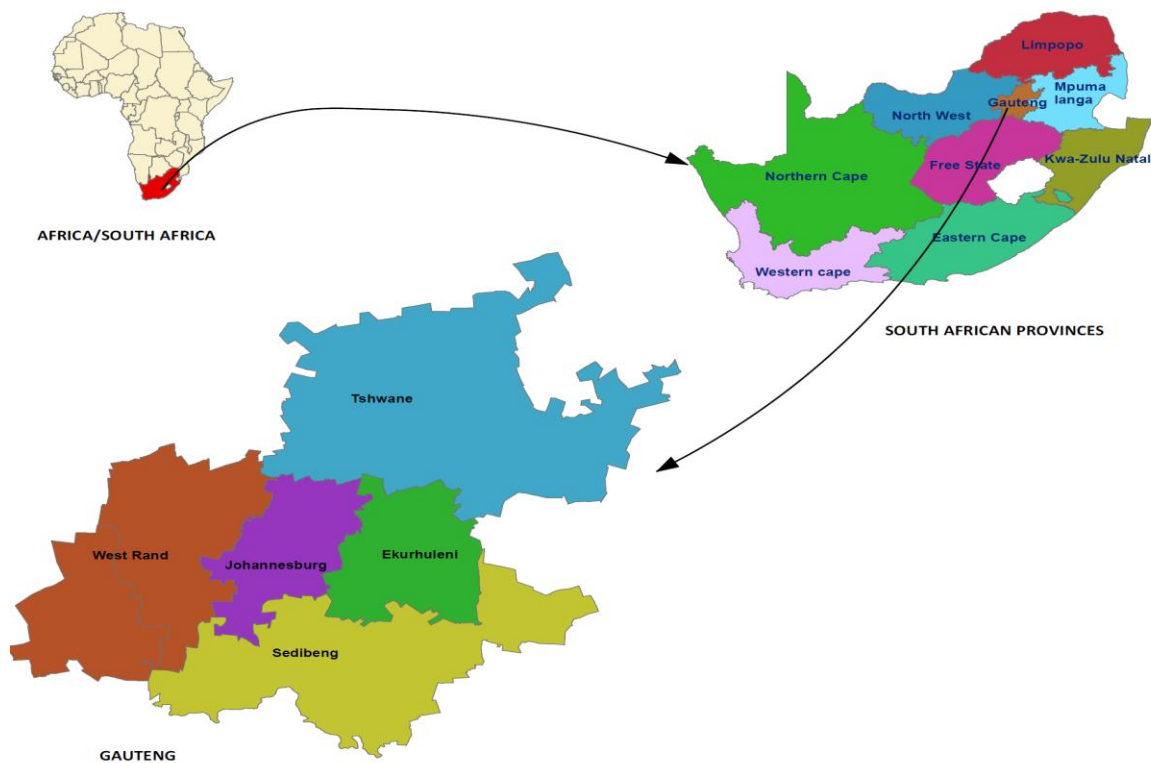


Figure 1: Tshwane in context

As the administrative seat of government and host to several embassies, Tshwane has proven to be a leader on the African continent in providing affordable industrial sites, various industries, office space and educational and research facilities. An estimated 90% of all research and development in South Africa is conducted in Tshwane by institutions such as Armscor, the Medical Research Council, the Council for Scientific and Industrial Research (CSIR), the Human Sciences Research Council and educational institutions such as the University of South Africa, the University of Pretoria and the Tshwane University of Technology. The table below provides a high-level summary composition of Tshwane.

Table 1: Summary of key information about Tshwane

Major residential areas	Akasia, Atteridgeville, Babelegi, Bronberg, Bronkhorstspuit, Centurion, Crocodile River, Cullinan, Eersterust, Ekangala, Elands River, Ga-Rankuwa, Hammanskraal, Laudium, Mamelodi, Pretoria, Rayton, Refilwe, Rethabiseng, Roodeplaat, Soshanguve, Temba, Winterveld and Zithobeni
Population	4 million (2022) ¹
Households	1,3 million (2022)
Area	6 345 km ² - Tshwane is the largest city in Africa and the third largest in the world based on land area
Operating budget	R42,1 billion (2022/23)
Capital budget	R2,79 billion (2022/23)

¹ Stats SA Census 2022 data

Municipal area GGDP²	R616 billion (current prices)
GGDP per capita	R168 124 (current prices)
GGDP growth	1,37% (2021)
Labour force	1,64 million people employed 0,3% labour force participation rate
Unemployment	30,6% (2017) (official definition)
Principal languages	English, Sepedi, Afrikaans, Xitsonga and Setswana
Industrial estates	Babelegi, Bronkhorstspuit, Ekandustria, Ga-Rankuwa, Gateway, Hennopspark, Hermanstad, Irene, Kirkney, Klerksoord, Koedoespoort, Lyttelton Manor, Pretoria North, Pretoria West, Rooihuiskraal, Rosslyn, Samcor Park, Silverton, Silvertondale, Sunderland Ridge and Waltloo
Principal economic activities	Government and community services (35%), finance (28%) and manufacturing (11%) (2021)
Focus sectors	Advanced manufacturing, agri-business (agricultural production and processing), tourism, and research and innovation
Interesting facts about Tshwane	Home to over 135 foreign missions and organisations Highest concentration of medical institutions per square kilometre in South Africa Knowledge, research and development capital of South Africa 28,3% of Gauteng's GDP (2017), 9,9% of national GDP (2017) and 53% of transport equipment exported from South Africa originates in Tshwane

² GGDP refer to the Gross Geographic Domestic Product

2. Methodological underpinnings adopted by the City of Tshwane Voluntary Local Review process

2.1 Laying the foundation and scoping of first set of key stakeholders

Foundational to the localisation of the SDGs in the City, as a critical first step the City coordinated an SDG localisation bootcamp for nominated City officials in June 2018. This was held in partnership with members of academia, United Cities and Local Governments, UN-Habitat, South African Local Government Association, South African Cities Network and C40 Cities Climate Leadership Group. Following this bootcamp, attempts were made to integrate the SDG work in the strategic planning and accountability processes of the City, even though this did not mature to the level of complete practicality owing to a number of challenges that were experienced at the time.

The process of developing the VLR report in the City adopted an inclusive and participatory approach. The City placed a premium on the engagement of external stakeholders, internal City line function departments and other government sector departments in the review of progress and the development of the VLR report.

2.2 Guiding principles

In the City, implementing the SDGs is firmly anchored on the UN SDG principle of leaving no one behind and this is expressed through ensuring that the plans of the City carefully consider all Tshwane residents and that those who are furthest behind, the most excluded, become a priority. The principles of inclusivity, transparency, responsiveness and accountability are integral in the implementation of the SDGs benefits, hence the full consideration by the City to align the City service delivery model.

In conducting the review process and developing the VLR report, the City used the principles of inclusivity and participatory governance as these yield sustainability. While efforts were made to ensure that stakeholders were engaged in the VLR process, much still needs to be done to ensure that the VLR process is co-owned by all stakeholders.

2.3 Aims and objectives of the Voluntary Local Review report

For the City, the two overall aims of the VLR process were as follows:

- Practically reviewing progress made towards the implementation of the SDGs through a wide range of sources, including external and internal stakeholder consultations
- Identifying future next steps and recommendations towards the acceleration of progress in implementing SDGs in the local city thereby closing any noticeable gaps in implementing UN Agenda 2030

Towards meeting the specific objectives of the City of Tshwane VLR report, clarity is needed for the following:



- Systematically finding out about and communicating local city progress in the implementation of the SDGs to national and provincial governments, civil society organisations, residents and other South African government agencies
- Assessing the sets of strengths and weaknesses of the City but also for the identification of key opportunities for best practices in implementing the SDGs locally
- Contributing and complementing the South Africa Voluntary National Review with a local knowledge repository towards the advancement of implementing Agenda 2030
- Identifying and increasing the voices of local communities that have a shared interest in monitoring the progress and achievement of SDGs in Tshwane

2.4 Data collection and analysis

The process of assessing progress in the implementation of SDGs and developing the VLR report made attempts to promote data integrity. Using carefully designed data-collection and information-gathering instruments and tools as well as semi-structured questionnaires, internal City line function departments were engaged in the collection and collation of data input that supported the review and progress for the development of the VLR report.

In the main, the City used the same officials who participated in the SDG localisation bootcamp held in 2018 to champion the input process in their departments. A further step was taken to engage one on one with internal champions from selected line function departments who had seconded themselves to work on the submission of the requested data and information used in developing the VLR report. Before designing and administering the data- and information-gathering tools, the City facilitated an information-sharing workshop to clarify the VLR process, including its data and information requirements.

Secondary data and information extracted through document review processes from credible sources, like the annual reports of the City that were audited by the Auditor-General of South Africa and other formal reports developed by the City (mid-year performance review reports) and line function departments were used. The City also used the reports that were officially published by Stats SA, which included General Household Survey data. Furthermore, peer-reviewed journals from the water, climate change, energy, agriculture and city-resilience domains were used to close some of the noted data and information gaps.

2.5 Data validation

To validate the information submitted, the City facilitated a one-day internal stakeholder engagement session that assisted in clarifying inputs made within the context of the VLR process. It also distributed the draft VLR report to national government sector departments. Furthermore, as a first point of call, the City also used Stats SA (the official data authority in the country) to validate the data used in developing the VLR report, using the South African Statistical Quality Assessment Framework (SASQAF).



The draft report was also disseminated to external stakeholders who participated in the facilitated VLR Stakeholder Consultation Workshop. This afforded the referenced stakeholder groups an opportunity to observe and confirm that their inputs and recommendations were considered in the final VLR report.

2.6 Stakeholder consultation

Using the principle of leaving no one behind, the City ensured the participation of external City stakeholders and groups that are among those mostly regarded as being left behind in the VLR process. Using its established City of Tshwane Stakeholder Database, complemented by the African Monitor Database, the City selected external stakeholders using purposive sampling methods.

Following the identification and selection of external stakeholders, the City hosted a one-day stakeholder engagement session in the form of a workshop facilitated with the help of African Monitor. The workshop was well attended by diverse external stakeholder organisations and individuals.

2.7 Compendium of United Nations Sustainable Development Goals



Figure 2: Compendium of 17 United Nations Sustainable Development Goals

2.7.1 Selection of the Sustainable Development Goals for the City of Tshwane Voluntary Local Review process

In selecting the goals and their corresponding targets and indicators for inclusion in the VLR report, the City considered data and information availability for assessing, reviewing and reporting on each goal as one of the critical factors for selection. It also considered the relevance of the goal to the mandate of local government and the maturity (in terms of evaluability) of the interventions or programmes implemented to serve the goal. In line with this rationale, the goals, targets and indicators presented in Table 2 were selected for consideration in the development of the City's baseline VLR report.

Table 2: Suite of selected Sustainable Development Goals by the City of Tshwane

<p>2 ZERO HUNGER</p> 	<p>Goal 2: <i>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</i></p>
<p>3 GOOD HEALTH AND WELL-BEING</p> 	<p>Goal 3: <i>Ensure healthy lives and promote well-being for all at all ages</i></p>
<p>6 CLEAN WATER AND SANITATION</p> 	<p>Goal 6: <i>Ensure availability and sustainable management of water and sanitation for all</i></p>
<p>7 AFFORDABLE AND CLEAN ENERGY</p> 	<p>Goal 7: <i>Ensure access to affordable, reliable, sustainable and modern energy for all</i></p>
<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p> 	<p>Goal 11: <i>Make cities and human settlements inclusive, safe, resilient and sustainable</i></p>
<p>13 CLIMATE ACTION</p> 	<p>Goal 13: <i>Take urgent action to combat climate change and its impacts</i></p>
<p>17 PARTNERSHIPS FOR THE GOALS</p> 	<p>Goal 17: <i>Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</i></p>

2 ZERO HUNGER



Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

3.1 Goal description

The World Food Programme defines people as being food secure when “they have availability and adequate access at all times to sufficient, safe, nutritious food to maintain a healthy and active life”. The main aim of the global goal is for the world to achieve zero hunger for all by 2030. It highlights the complex inter-linkages between food and nutritional security, rural transformation and sustainable or alternative agriculture. Indeed, early cities relied heavily on local sources of food and water for survival, but today it is about distant exploitation.

According to the Food and Agriculture Organization of the United Nations (FAO), even though they yield and market large volumes of agricultural commodities, modern industrialised food systems have been, are and will continue to be associated with heavy cases of malnutrition, food insecurity, deepening poverty and social exclusion in many parts of the world (FAO, 2008). According to the 2011 figures of the FAO, close to one billion people go hungry everyday of their lives and about 815 million are malnourished people who live in the rural areas of the developing world (FAO, 2010; Pimbert, 2008). In sub-Saharan Africa, more than 40% of the population is undernourished and that is where most of the hunger problems are recorded (Barker, 2007). In fact, Dr Vandana Shiva stated that the same system which causes hunger and starvation in the global south is causing obesity in the global north (Shiva, 2000). All these problems are mainly attributed to the industrialised food and agriculture system.

Close to home in South Africa, in 2021 Stats SA conducted a study which indicated that out of almost 17,9 million households in South Africa, almost 80% (14,2 million) reported that they had adequate access to food, while 15% (2,6 million) and 6% (1,1 million) stated that they have inadequate and severe inadequate access to food, respectively.

At a global level, there are eight targets and 14 indicators set out to measure progress towards realising the goal on ending hunger in all its forms for everyone in the world, achieve food security and improved nutrition (and achievement of nutritional security) and promote sustainable agriculture (as opposed to industrial agriculture which is not sustainable in the main). The five outcome targets are as follows:

- Ending hunger and improving access to edible food
- Ending all forms of malnutrition
- Agricultural productivity
- Sustainable food production systems and resilient agricultural practices
- Genetic diversity of agricultural seeds, usually open pollinated varieties of seeds, cultivated plants and farmed and domesticated animals, as well as investments, applied research and practical agricultural technology

The three means of implementation as linked to Goal 17 include addressing agricultural and food global trade restrictions and distortions in the world agricultural markets and food commodity markets, and their key derivatives.

3.2 Progress towards realising the goal

Hunger, food and nutritional insecurity have been challenges in urban South Africa for a very long time and have been compounded by high inequality in the population. In Tshwane over the recent years, hunger, food and nutritional insecurity have been exacerbated by the outbreak of the COVID-19 pandemic, climate change emergency, energy crisis, rising costs of agricultural production (farming variable input cost of seed, agrochemicals, labour, fuel, etc), rising energy tariffs and many other key factors. These events have had a significant impact on food and nutritional security by making food not easily accessible to many Tshwane residents. Thus, there is most likely an increase in the number of individuals and households experiencing food and nutritional inadequacy and hunger.

According to a report that accounted on the findings for the assessment of food and nutritional inadequacy and hunger in South Africa in 2021 using the General Household Survey, issued by Stats SA (2023:07), a total of 77 033 (3,7%) households reported having people in Tshwane that experienced food, nutritional inadequacy and hunger. The report attributes hunger to challenges ranging from high levels of poverty and unemployment to the energy crisis, rising energy tariffs, ever-increasing interest rates and the rise in the cost of living, which includes soaring food, nutrition and fuel prices. Table 4 below presents and locates households experiencing hunger in Tshwane as a comparative analysis to other metropolitan areas in South Africa.

In the quest to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture, the City developed and implemented several guiding instruments in the form of policies, strategies and issue-specific plans. These instruments that guided the implementation of the City's interventions and programmes included the following:

- Integrated Food Security Policy
 - Among others, the policy is aimed at enhancing urban food and nutritional security
- Integrated Agricultural Development Strategy
 - The strategy is intended to make a significant contribution in promoting food self-sufficiency and food security in Tshwane
- Food Security Strategy
- Urban Agriculture Programme

3.2.1 Target 2.1: By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

3.2.1.1 Introduction

Corporate agribusinesses, mostly in America, have spent millions of dollars to market and convince the world that the industrialised food system works efficiently and effectively and that is why it can feed the population of the world (Barker, 2007). Riding

through the huge muscle and mask of the International Monetary Fund, World Bank and other bilateral agreements, the system used media like television as the means and instrumentality to sell this propaganda of feeding six billion well. These ever larger and ever fewer but giant global corporations are at the centre of the industrialised global food international economies (Barker, 2007; Shiva, 2000). Meanwhile, there is a large and growing part of the population of the world that go hungry and impoverished each day, which the FAO has recently estimated to be a staggering one billion (FAO website, 2011).

3.2.1.2 Local context

In South Africa, food and nutritional security is recognised as one of the fundamental human rights that the Constitution of the Republic of South Africa, 1996 promotes. In support of this constitutional imperative, the City acknowledges that to survive on a daily basis, residents require food to eat. This recognition has over the years rallied the City to take practical steps to implement key programmes that provide access by poor, indigent and vulnerable individuals to safe, nutritious and sufficient food.

In this regard, the efforts of the City have, among others, led to the establishment of a food bank which is operated as a small storage facility with a very small budget that manages to secure food items for distribution to needy individuals, families and non-profit organisations (NPOs) referred by social workers. The food bank also assists families and individuals hit by disastrous emergencies like floods and shack or house fires. Table 3 below presents the number of beneficiaries of the food bank services over a two-year period (2021/22 and 2022/23 financial years).

Table 3: Number of indigent families supported by the City with food parcels

Food distribution year	Total number of indigent families supported
2021/22	2 579
2022/23	1 974
Total	4 553

Source: City of Tshwane archives

Additionally, in pursuit of Goal 2 the City is developing a programme on urban agriculture which includes food and nutritional security, among other things the programme seeks to achieve. The City is also promoting household and community gardens as a measure of ensuring access to food and nutrition by Tshwane residents.

In terms of food and nutritional security, Mazenda et al (2022) found that 39,2% of households were food secure, 16,6% suffered from mild food and nutritional insecurity, 12,1% were moderately food insecure and 32,1% were severely food insecure.

Table 4 below shows that two-thirds of those households that experienced hunger are located in urban areas, with Tshwane at 3,7 %.

Table 4: Comparative analysis of households experiencing hunger by metro and non-metro areas

Area	Number of households with people who experienced hunger	Percentage
South Africa	2 078 496	11,6%
Metros		
Cape Town	240 970	11,6%
Johannesburg	238 610	11,5%
Ekurhuleni	93 241	4,5%
Tshwane	77 033	3,7%
Mangaung	48 500	2,3%
Buffalo City	32 771	1,6%
eThekweni	29 393	1,4%
Nelson Mandela Bay	19 820	1%
Non-metros		
KwaZulu-Natal non-metro	333 470	16%
North West non-metro	224 596	10,8%
Mpumalanga non-metro	220 107	10,6%
Eastern Cape non-metro	133 542	6,4%
Gauteng non-metro	116 929	5,6%
Northern Cape non-metro	77 342	3,7%
Free State non-metro	77 221	3,7%
Western Cape non-metro	49 386	2,4%
Limpopo non-metro	65 564	3,2%

Source: Stats SA General Household Survey 2021

3.2.2 Target 2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

In its efforts to realise the target, the City has been implementing the agri-parks programme, which creates opportunities for landless people who have a passion for agriculture. The agri-parks programme is also aimed at transforming rural, peri-urban and urban areas in Tshwane by investing in agricultural production infrastructure to create decent jobs and ensure food and nutritional security for all. The agri-parks focus on the production of horticultural crops, like vegetables using open underused land and tunnels (tunnel agriculture), egg production and animal husbandry.

Over the years, the agri-parks programme has created more than 45 permanent jobs and other seasonal jobs during peak agricultural production seasons, thereby contributing to incomes and reducing poverty and household inequalities. This programme also makes a significant contribution in realising self-sufficiency and food

and nutritional security. Further, the programme has proven to make a sizable contribution in providing dietary diversity.

Agricultural training, agricultural extension and agricultural advisory services further contribute to the target of doubling the productivity and incomes of small-scale food producers in Tshwane. It is about imparting practical agriculture knowledge to improve the technical and business capacity of smallholder farmers and community projects. Over 700 producers of different scales of operations have gone through the mentioned training and capacity-building programmes in the past five years.

3.3 Multiplier effect of the goal

Food and nutritional security (Goal 2) is highly linked to the good health and well-being of citizens (Goal 3). Food insecurity may result in malnutrition and in children being underweight.

Goals 1 and 2 are intricately linked to poverty, which result in hunger and food insecurity for households and individuals. According to Mazenda et al (2022), Tshwane household income levels are low, with roughly half of all households earning less than R3 500 (US \$214) per month, a key indicator of food and nutritional insecurity. Addressing food and nutritional insecurity in Tshwane will likely address the various multidimensions of poverty and inequality.

3.4 Key challenges

As land resources are now known to be running out in Tshwane, there is stiff competition for land, and agricultural land has gradually been lost to equally competing needs, especially housing and industrial developments. This has a negative impact on expanding urban agriculture production and consequently on the efforts to address food and nutritional insecurity and promoting self-sufficiency.

Climate change exacerbates the dwindling agricultural productivity, necessitating the need to implement climate-smart agricultural practices and innovative techniques like the planting of drought-tolerant open pollinated varieties of seed. However, some of the techniques are not within reach of smallholder farmers as these have proven to be costly.

3.5 Conclusion

In the history of food and agriculture production, a completely new model and approach has emerged over the last 100 years, which is called the industrialised food and agriculture system. According to Barker (2007), the conversion of millions of hectares of land that once grew a great diversity of locally developed food crops into vast monocultures that are raised by the extensive use of agrochemicals and requiring oil-guzzling machinery and commercial seeds is what is at the epitome of industrialised food systems. Pimbert (2008) argued that as a global system it is linked to the expansion of a development model that considers small- and medium-scale farmers and artisanal fishing, nomadic pastoralists and indigenous communities in cities to be outside of “modernity”, hence this model undermines and eliminates small-scale and artisanal food and agricultural producers. Yet there are more than a dozen serious and disturbing economic, environmental and social challenges (like unemployment in

cities) and problems which are embedded in this system. Fundamentally, this is where the problem of food insecurity is squarely located and the need arises to bring small-scale, urban agriculture to feed those, in cities for example, who cannot afford to buy from commercial systems of food production by growing their own food.

Linked to the above as a country, South Africa is facing serious challenges that may have an impact on the country's state of food security, and so is Tshwane as a microcosm. Formal unemployment in Tshwane that perpetuates poverty and food insecurity is still a critical factor in improving food security. A high proportion of households with inadequate access to food and who experience hunger do not grow their own food, yet they reside in urban Tshwane as a metro (urbanisation of hunger and poverty). In addition, household participation in agricultural activities or in production of own food needs to be encouraged so that they can increase production.

Established in April 1992 as a group of farmers' representatives, La Via Campesina is an international movement which brings together millions of peasants, small- and medium-sized farmers, landless people, female farmers, indigenous people, migrants and agricultural workers from around the world (La Via Campesina, 1996). Representing about 200 million farmers from over 70 nations and 150 national organisations, La Via Campesina membership is from Africa, Europe and the Americas. Based on Target 2.3, the smallholder farmers in Tshwane need to be linked to La Via Campesina global membership to gain access to agricultural knowledge, even for new urban agriculture members.

3.6 Key summary recommendations

The City has noted the need to bank land and intensify the implementation of the available agricultural programmes aimed at impacting hunger positively. The City also needs to keep on identifying strategic external partners for tailor-made programmes for efforts aimed at contributing significantly to ending hunger, achieving food and nutritional security and promoting sustainable agriculture. To this end and based on Target 2.3, smallholder farmers in Tshwane need to be linked to La Via Campesina global membership.



Goal 3: *Ensure healthy lives and promote well-being for all at all ages*

4.1 Goal description

Goal 3 makes a bold commitment to ensuring healthy lives and promoting well-being for all in the world at all ages. It aims to promote healthy lifestyles and well-being through preventative measures to avoid illness and disease, and to provide modern and efficient healthcare for everyone. Universal health coverage and access to safe and affordable medicines and vaccines are central to the aspirations of the goal. To achieve the goal, increased investment in health systems is needed to support countries, especially as they recover from the devastating experience of the COVID-19 pandemic and to build resilience against future health threats.

4.2 Progress towards realising the goal

4.2.1 Target 3.1: **By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births**

Despite many challenges experienced, great strides have been made in implementing interventions aimed at reducing maternal mortality. In this regard, the City dedicated its efforts to rendering reproductive health, antenatal and postnatal care services in all its primary healthcare clinics. Overall, the City is providing a high-quality and a comprehensive package of primary healthcare services at all its clinics.

The City has also maintained the Ideal Clinic status and improved clinic infrastructure. Further, the City deploys mobile clinics and outreach services to support public health initiatives and awareness, especially in informal settlements, as part of promoting access to healthcare services. Lastly, the City has expanded operating hours at local clinics to ensure continued provision of services and extended service hours on Saturdays to accommodate working residents who need healthcare services.

Furthermore, the City also implements the antenatal care programme developed by the University of Pretoria and the University of the Witwatersrand to deliver antenatal care services. The City also runs continuous awareness campaigns (door to door) to promote clinic visitations by all pregnant women to come for antenatal care very early in their pregnancy, preferably before 20 weeks of pregnancy, which also includes raising awareness of other maternal health issues.

The City also implements the Umbi Flow Project at clinics, which is a low-cost ultrasound device to screen expecting mothers during pregnancy to identify high-risk pregnancies and reduce maternal complications. It empowers nurses and midwives in primary healthcare settings to assess the health of a growing foetus and identify possible risks for early intervention, thus increasing life expectancy and reducing mortality. Further, the City works for extended service hours at identified clinics on Saturdays to improve access to care. Lastly, City clinics screen for HIV as part of its maternal health packages.

Some of the critical tangible results observed or achieved because of the focused and dedicated attention to Target 3.1 interventions and providing the services listed above include the following:

- Improved programmes related to antenatal care services, such as the MomConnect initiative. MomConnect is a South African national Department of Health initiative which aims to support maternal health using cell phone-based technologies integrated into maternal and child health services. It provides pregnant women with an interactive platform to give feedback on health services received and to receive health advice.
- Fertile women in the community (women between the ages of 15 and 44) should be protected from unwanted pregnancies. Various family-planning methods are available at clinics which led to a 3% increase in use. A total of 127 597 uninsured fertile women in Tshwane visited clinics for family-planning methods during the reporting year 2022/23, indicating a 3% increase when compared to the previous year of 2021/22 where a number of 124 327 was recorded. This figure excludes coverage through sterilisation and condom use.
- Fast-lane options for family-planning services for the youth have been introduced to achieve increased access to reproductive health services without having to queue, specifically to accommodate schoolgoing youths.

4.2.2 Target 3.2: By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births

The City has a package of services and other interventions aimed at ending preventable deaths of newborns and children under five years of age, aiming to reduce neonatal mortality.

Firstly, the City has comprehensive child health services available and implemented at all primary healthcare clinics, including the Integrated Management of Childhood Illness Programme. Secondly, the City implements the Expanded Programme on Immunisation at all primary healthcare clinics. It has also been intensifying health education, especially during pregnancy, by clinicians and through health promotion messages on the importance of treatment compliance and correct feeding practices to prevent vertical transmission during the breastfeeding period.

The City has also intensified case finding among HIV-exposed infants. It is also upscaling the initiation of optimised antiretroviral treatment regimens to children, adolescents, and pregnant and breastfeeding women living with HIV. The City is also promoting and advocating multidisciplinary team engagements and stakeholder participation in intensified case finding and retaining clients to care. On Saturdays, identified clinics have extended service hours meant to improve access to care. Lastly, the City has been conducting door-to-door education and awareness campaigns with messages that also include maternal health and preventing deaths of newborns and children under five years.

As a result of the implementation of the Target 3.2 suite of interventions and provision of services, commendable progress has been observed. Among others, the results and progress made include the overall reduction of the mortality rate among children of five years old. The City has also seen that the introduction of polymerase chain reaction (PCR) testing at birth has contributed to a reduction of maternal mortality.

In Tshwane, immunisation services are available at all health facilities, including private sector facilities. There has been noted improved programmes related to antenatal care services, such as the MomConnect initiative.

Incidences of diarrhoea and severe malnutrition are monitored at all public health facilities. Severe malnutrition (marasmus) is diagnosed when a child is found to weigh less than 60% of the appropriate estimated weight for their age. Kwashiorkor is diagnosed when a child weighs between 60% and 80% of the expected weight and has oedema as well as other features of kwashiorkor. Marasmic kwashiorkor is diagnosed when a child weighs less than 60% of the expected weight and has oedema.

During the 2022/23 financial year, 2,4 per 1 000 children younger than five years who were weighed at a primary healthcare clinic in Tshwane were found to be severely acutely malnourished, which showed an increase of 1,8 per 1 000 when compared to the previous year's rate of 0,6 per 1 000. Although an increase in malnutrition was observed, early intervention strategies could be implemented to mitigate complications.

An average of 1,3 per 1 000 children younger than five years who visited primary healthcare clinics in the 2022/23 base reporting year had diarrhoea with dehydration, showing a decrease of 2,6 per 1 000 compared to the previous year's incidence of 3,9 per 1 000. Further to this, health sector interventions included the promotion of exclusive breastfeeding practices as well as the integration of deworming of children and Vitamin A supplementation at clinics and during outreach services. In Tshwane, the rate of infants exclusively breastfeeding increased from 46,6% in the 2021/22 reporting year to 47,2% in 2022/23. Vitamin A dose for 12 to 59 months coverage improved from 59,2% in 2021/22 to 67,3% in 2022/23.

In Tshwane, incidences of pneumonia in children under five years decreased from 20,6% in 2021/22 to 19,6% in 2022/23. Incidences of diarrhoea with dehydration in children under five years decreased from 6,4% in 2021/22 to 4,8% in 2022/23. The City achieved an immunisation coverage of 75,4% in the 2022/23 reporting year. This excludes community members presenting at private vaccination facilities and procuring their own vaccines who are therefore not required to submit statistical data to the district, provincial or national Department of Health. Efforts to include private provider data is coordinated at national level. Continuous improvement strategies are implemented to increase vaccination coverage, including extensive health education and social media campaigns encouraging parents to use the services available, focusing on the importance of preventing disease and death.

4.2.3 Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

In its efforts to end the epidemics of AIDS, tuberculosis (TB), malaria and neglected tropical diseases, and combat hepatitis, water-borne diseases and other communicable diseases, the City embarks on the implementation of the following specific Target 3.3 interventions primarily via primary healthcare services:

- Managing and coordinating clinic operations and programme interventions
- Managing pharmaceutical services

Overall, the City is coordinating HIV, TB and sexually transmitted infections (STIs) response programmes by all sectors of society, including government, civil society, business, development partners and stakeholders. The City is also implementing ward-based door-to-door education campaigns on HIV, TB and STIs and linkages to services supporting outbreak response, such as COVID-19, cholera and so forth.

Specifically, the City implements comprehensive primary healthcare service packages at all clinics inclusive of HIV, TB, STIs and communicable diseases management. The City is also in the process of intensifying case finding among HIV-exposed infants. The City is also upscaling the initiation of optimised antiretroviral treatment regimens to children, adolescents and pregnant and breastfeeding women living with HIV and implementing a multisectoral response, including ward-based services.

The City also implements integrated community-based services inclusive of all sectors. Further, it supports outbreak response programmes in collaboration with the Gauteng Department of Health. Lastly, the City continuously implements awareness training for metro police members on HIV, TB and STIs in the context of human rights for at-risk and vulnerable population groups.

The implementation of the interventions listed above has resulted in the following results and progress over time:

- The consistent monitoring of food-handling premises yielded a significant increase in the rate of compliance by such premises
- The intensification of microbiological analysis of water and food is showing improvements in the results

4.2.4 Target 3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

To realise Target 3.4, the City made significant progress, which includes the provision of primary mental health screening and treatment at all its clinics. This is linked to treatment protocols and available medication approved for provision at entry-level primary healthcare facilities.

The City also provides secondary mental healthcare, including services provided by specialist teams, such as psychologists and psychiatrists, that are provided by the Gauteng Department of Health at identified clinics, community health centres and

hospitals. The mental health caseload of community members visiting Tshwane health facilities remained constant at 2,5% for both the 2021/22 and 2022/23 reporting years. The City has also seen increased mental health visits with the 18 years and older rate increasing from 83,6% in 2021/22 to 88,2% in 2022/23.

With regard to non-communicable diseases, the Stats SA Mortality and Causes of Death Report indicated that, since 2010, the number of deaths due to non-communicable diseases is higher than those due to communicable diseases. Deaths due to non-communicable diseases are increasing. Diabetes, cardiovascular and hypertensive disease feature among the ten leading causes of death in South Africa.

In term of linkages to other goals, like Goal 17, the chronic disease programme was further strengthened through the implementation of a central chronic medicine dispensing and distribution model through a partnership between governmental and private practice. Through this partnership, stable chronic patients can collect repeat prescriptions from approved pickup points closer to their homes or workplaces, which is convenient in terms of time and location. This system is being implemented in a phased approach and extended as provider capacity is increased. This initiative has improved accessibility of medicine and convenience to clients.

There are many other programmes available in all of City health facilities to screen, test, diagnose and treat various non-communicable diseases. Specific focus is placed on lifestyle diseases, such as diabetes and hypertension.

The percentage of Essential Drug List medicines available at primary healthcare facilities increased from 95,13% in 2021/22 to 95,38% in 2022/23. In the 2022/23 reporting year, about 9 134 additional patients enrolled in the Central Chronic Medicines Dispensing and Distribution Programme in the Tshwane District, which increased the number of patients on the programme to 364 933 since its inception in 2014, with 184 medication pickup points contracted to the national Department of Health.

On diabetes, the new clients 40 years and older detection rate for residents presenting to City health facilities was 0,4% in the 2021/22 financial year and 0,3% in the 2022/23 year. With regard to hypertension, the new clients 18 years and older detection rate for residents presenting to City health facilities was 0,6% in the 2021/22 year and remained 0,6% in the 2022/23 year. On cervical cancer screening coverage, the 30 years and older rate improved from 35,4% in 2021/22 to 72,7% in 2022/23.

4.2.5 Target 3.5: Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

In its efforts to strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and the harmful use of alcohol, the City implements a multiplicity of interventions, which among others include the implementation of the City's Drug Master Plan 4th edition 2019–2024 and strategy focusing on drug demand reduction, harm reduction and supply reduction.

The flagship programme of the City is the Community Oriented Substance Use Programme (COSUP). COSUP is a comprehensive community-based intervention that provides services for the prevention and treatment of substance use and abuse

in Tshwane. Upfront it needs to be noted that COSUP is a comprehensive substance abuse prevention programme. It is a community-based, low-threshold response to the use of drugs, which seeks to reduce harm, and adds to and is integrated with the primary healthcare, HIV and social services of the City. This is implemented as a suite with continuous awareness-raising and education campaigns to deter residents from using substances harmfully and abusing substances.

COSUP is aimed at minimising the health, social and economic impacts of drug and substance use through the prevention, identification and resolution of substance use disorders in Tshwane using a community-oriented primary care approach. COSUP offers a continuum of care that includes abstinence as an end goal but does not neglect those who are unwilling or unable to stop their use of drugs or even those who have not started using drugs.

The City implements the programme in collaboration with the University of Pretoria. The programme is implemented at 16 sites across four of the seven regions of Tshwane and offers a wide range of services, all intended to make maximum impact in fighting drug and substance use and abuse. Given that the implementation of COSUP responds to all the above interventions, progress will be presented in line with this programme and will include (although silently) issues relating to the other two interventions as listed above. In this regard, the details below serve as an account on the progress made.

Some of the COSUP services provided include prevention-oriented services, such as the following:

- Education, training, awareness and outreach campaigns
- Skills development and treatment-oriented services in the form of identification, prevention and resolution of substance use disorders
- Capacity-building for community structures
- Identification of people with drug issues
- Health assessments
- Opioid substitution therapy
- Provision of needles and syringes
- Psychosocial support services

The table below reflects a summary of performance against COSUP key performance indicators as at the end of September 2022.

Table 5: COSUP performance against key performance indicators at the end of September 2022

Key performance indicators	Targets	
	Planned	Actual
Number of service users enrolled in COSUP	Year 1: 700 Year 2: 1 400 Year 3: 2 000	6 043
Number of visits by enrolled service users to COSUP sites	2 or more visits per service user enrolled	71 779

Key performance indicators	Targets	
	Planned	Actual
Percentage of service users retained in COSUP	50%	64,8% (3 915 of 6 043 clients)
Number of COSUP service delivery sites established	<u>20 sites</u> Year 1: 7 new sites Year 2: plus 7 new sites Year 3: plus 6 new sites	17 (primary plus satellite sites)
Number of service users enrolled in and/or completing a skills development course or programme	Total: 1 000 50 service users per site	1 004
Number of service users initiated on opioid substitution therapy	500	<u>1 541</u> 1 221 COSUP-funded 320 self-funded
Percentage of service users retained in the Opioid Substitution Therapy Programme	70% (COSUP-funded)	64,1% (783 of 1 221)
Needle and Syringe Programme	Number of clients: 941	
	Number of needles distributed: 20 307	
	Percentage return rate: 85% (planned) 88% (actual)	
Number of meetings or group sessions done	503	
Number of participants involved in community adherence groups	531	

Source: City of Tshwane archives

Furthermore, a total of 12 drop-in facilities have also been established or supported in the City. Drop-in centres provide physical support and create a community for the service users and a place of belonging. To date, COSUP service users have attended a total of 71 779 clinical and counselling sessions and a total of 31 rehabilitated former service users have been employed as peers in COSUP. Further, a total of 64 transitional housing spaces have been created as a safe space to support those in treatment who do not have accommodation or have to live in unsafe conditions. Also in Tshwane, a total of three hospice beds have been secured.

A total of 161 NPOs and other organisations have been engaged with and mapped on the Tshwane Drug and Substance Abuse Network. COSUP has employed and trained 57 professionals. A total of 1 000 medical students, doctors, clinical associates and allied health service providers are trained on substance use and interventions annually and a total of 14 cooperative subagreements have been concluded to date.

Following an analysis report of drug and substance abuse within Tshwane conducted by the University of Pretoria, one of the main gaps identified was a need for a 24-hour help desk or call centre to debrief substance users, conduct a rapid telephonic triage service and link to social services and/or other drug and substance abuse network partners for aftercare, family reunification and community reintegration services. The HopeLine was established in 2017 to provide a 24/7 option for people in crisis to call. The service provides a very necessary lifeline for the people of Tshwane. The service

has since been changed to a toll-free number to make it more accessible to those in need.

4.2.6 Target 3.7: By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes

The City has made commendable strides in improving access to healthcare services, which include sexual and reproductive healthcare services comprising family planning, information and education.

Progress made in this regard includes a multisectoral management response to HIV/AIDS, TB and STIs in which the City made strides in implementing male and female condom distribution through outreach and door-to-door campaigns. This led to the distribution of 8 228 672 condoms in the 2021/22 reporting year and 4 338 383 in the 2022/23 reporting year. The City also ensured that the reproductive health service package is available and implemented at all primary healthcare clinics.

The City signed a Memorandum of Understanding (MoU) with PinkDrive to screen for gender-related cancers, including providing mobile mammogram services at identified clinics. Further, the City partners with the University of the Witwatersrand Reproductive Health and HIV Institute in implementing and responding to matters relating to sexual and reproductive health and HIV.

According to the 2011 Census conducted by Stats SA, public healthcare facilities in Tshwane are within 5 km of user households. This means that 97% of households in Tshwane have easy access to public healthcare services, which exceeds the national target of 90%.

Clinic visitation as an indication of access to healthcare facilities for services is one of the critical indicators that the City uses to measure accessibility to healthcare services in Tshwane. This is despite visitation of clinics also potentially being a measure of challenges in preventative interventions. In this regard, a total of 1 262 778 patients visited municipal clinics during the 2022/23 reporting year. While this represents a decrease of 3% in clinic attendance, compared to the previous 2021/22 reporting year's attendance of 1 295 068 patients, this still represents a high number of visits. The positive indication of the comfortability of residents visiting clinics can be attributed to the efficiencies in handling patients and care given at these clinics.

To gauge issues relating to access and community experience with healthcare services in healthcare facilities in Tshwane, the City conducted and completed a pilot survey which focused on measuring community experience of care relating to health services, health promotion, community-based services, door-to-door services, drug and substance abuse and municipal health services available in communities.

Further fast-lane options for family planning services for the youth have been introduced to reduce waiting times and accommodate schoolgoing youths. Comprehensive youth interventions and clinical guidelines are also available in Tshwane.

In line with Section 74 of the National Health Act, 2003 (Act 61 of 2003) and the District Health Management Information System Policy, the Tshwane Health District uses the Department of Health’s approved management information systems, such as the District Health Information System, ART Tier.net and the Electronic TB register, as well as other in-house-developed custom-specific systems, such as the Rx Solution – Electronic Patients Administration System.

To promote access to quality health services, the national Department of Health started the Ideal Clinic Programme. In terms of this programme, an Ideal Clinic is a clinic with good infrastructure, adequate staff, adequate medicine and supplies, good administrative processes and sufficient bulk supplies that use applicable clinical policies, protocols and guidelines to ensure the provision of quality services to the community. The framework and manual for this programme was developed to provide guidance on how to achieve Ideal Clinic status and to maintain such status. Checklists are used as scoring calculation tools in monitoring and evaluation software to measure performance.

Developing and sustaining the Ideal Clinic status at primary healthcare clinics requires several components to be in place that must function well. Each component comprises elements and the steps that must be taken to achieve each element. These components include administration, integrated clinical services management, medicines, supplies, laboratory services, human resources for health, support services, infrastructure, health information management, communication, district health system support and implementing partners and stakeholders. Table 6 below shows a summary of the three Ideal Clinic category weights in Tshwane.

Table 6: Summary of the three Ideal Clinic category weights in Tshwane

Summary of Ideal Clinic category weights	Silver	Gold	Platinum
Non-negotiable vital (3 elements)	100%	100%	100%
Vital (53 elements)	60% to 69%	70% to 79%	≥80%
Essential (104 elements)	50% to 59%	60% to 69%	≥70%
Important (78 elements)	50% to 59%	60% to 69%	≥70%

Source: City of Tshwane archives

Over the 2020/21 reporting year, of the 24 clinics managed by the City, 19 obtained platinum status, three obtained gold status and two were not evaluated due to extensive renovations that were taking place at the time of the assessment. All 24 clinics managed by the City obtained platinum status during the 2021/22 reporting year assessment and sustained that platinum status in the 2022/23 year.

The City conducts a yearly survey referred to as the Patient Experience of Care Survey, which seeks to gauge the experience of patients visiting the City’s healthcare facilities and interacting with officials in those healthcare facilities about the care given and their level of satisfaction with the care given. This is meant to guide service delivery improvements. The results of the survey were captured in 2021 as 93,3% satisfaction achieved. In 2022, a 76% satisfaction rate was achieved (including an additional element, access to care) and in 2023, an 85% satisfaction rate was achieved.

Looking at the additional aspect of the survey “access to care”, which was included for the first time in the survey in 2022, great improvement has been observed as the access to care rating improved from 46,5% in 2022 to 88% in 2023.

4.3 Multiplier effect of the goal

Food and nutritional security (Goal 2) is highly linked to the good health and well-being of citizens (Goal 3). The promotion and realisation of healthy lives and well-being for all at all ages plays a significant role in other goals. The aspirations harboured in all other goals can be better realised when people or residents of all ages are healthy and able to pursue other humanly possible life things. A clear example of the contribution of this goal to other goals is better captured in the relationship that exists between the work undertaken under Goal 3 and Goal 11.

This relationship is observed when the health and well-being of all Tshwane residents is as required to sustain their lives. The contributor to such state of being could significantly be because of the impact of the services implemented as organised under Goal 11. Services and interventions organised under Goal 11 play a significant role in promoting healthy lives and improving the well-being of all residents. When there is access to adequate and sustainable good quality basic services (water, housing, electricity, sanitation, waste collection, etc) such access of these services improve the health conditions and well-being of residents of all ages.

Access to adequate housing and transportation services promotes well-being because access to housing prevents many harmful exposures that affect healthy living negatively. Also, when there is an effective and affordable transport system and services, useful goods and services that support and sustain human lives can move easily from one place to another, thus promoting easy access to such life-supporting goods and services to all residents, which has a significant positive impact on the lives of residents. The affordability of an effective transport system reduces travelling costs and time while also promoting access to areas of economic activities, meaning that commuting from areas of residence to areas of work promotes active participation in meaning life activities by all residents.

Equality for residents with good health and well-being can make a significant contribution in the realisation of the aspirations harboured in Goal 11 that promote sustainable cities and communities. When communities are healthy and experience good well-being, that means there will be enough of a labour force to drive the work required to promote sustainable cities and communities, as healthy people with good well-being are most likely to pursue societal goals that seek to sustain their well-being.

4.4 Key challenges

Notwithstanding the commendable progress made in many areas that serve the goal, there remain many challenges that hindered the maximum achievement of the targeted progress and results that will contribute significantly to the realisation of the goal. Among others, some of these challenges include the following:

- The lack of or limited resources necessary to accommodate the ever-growing demand for healthcare services impedes meeting the targets and realising the objectives set for this goal.



- Notable weaknesses and overloading in the healthcare system which, among other things, can be attributed to limited response resources and failures in other related systems and services that have a spillover effect on the health of residents and the healthcare system.
- The limited integration of the healthcare system to other related services, such as education, social security services and economic development services.
- The ever-growing population putting pressure on the healthcare system through a higher demand for healthcare services.
- Limited human resources capacity to support the robust implementation of healthcare services and initiatives or programmes.
- The financial constraints currently experienced in the City impact negatively on many aspects relating to the provision of an effective healthcare service that will have a positive effect on ensuring healthy lives and promoting well-being for all at all ages. Some of the limitations brought by the undesirable financial position in the City include the inability to fill critical vacant positions needed for driving some of the priority services necessary for the realisation of the aspirations of the goal.
- The unaffordability of opioid substitution therapy for addiction treatment makes the drug inaccessible to many clients. This impacts negatively on maximising the success of COSUP.
- More needs to be done to address the problem of drug and substance abuse given that it keeps increasing daily with serious negative impacts on individuals, communities and Tshwane at large.

4.5 Key recommendations

To respond adequately to and address the challenges presented above (and other challenges not discussed in this report), attention must be given to the following actions or interventions and proposed solutions:

- The City must find creative ways of improving its financial situation and intensify the implementation of its Financial Recovery Plan.
- Find creative ways of implementing a risk-based approach in the prioritisation of the most vulnerable communities with regard to the provision of primary healthcare services.
- Augment capacity, especially prioritising critical vacant positions.
- Strengthen the existing partnerships with other organisations and forge new partnerships, especially in service areas that have been severely impacted negatively by limited financial and human capital resources, and this must be done within the limits of the guiding legislation.
- Find new ways of supplying affordable opioid substitution therapy, which can include the local manufacture of products and price negotiations, all of which require engagement at state level.



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

5.1 Goal description

Goal 6 is aimed at ensuring the availability and sustainable management of water and sanitation for all. According to Brown (2001), early cities relied heavily on local underground and overland pristine water sources for survival, which was sustainable and well manageable, but today it is about distant exploitation. The sustainable management of water resources and access to safe drinking water and sanitation are critical for promoting both economic and social growth. It further provides leverage for investments in other sustainable development objectives. Improvements in drinking water and sanitation play a critical role in influencing progress in other areas of development, which include health, hunger reduction, poverty alleviation, infrastructure development and gender equity, to mention just a few.

Yet cities like Los Angeles, for example, draws water from the Colorado River, which is about 970 km away, Mexico City draws water from 150 km away and in China, Beijing is planning to draw water from the Yangtze River Basin, which is approximately 1 200 km away (Brown, 2001). The City draws the bulk of its water from the Lesotho Highlands. Clearly from an urban planning perspective, this is not sustainable. As oil becomes more expensive, so will the cost of pumping, treatment distribution and recycling. What makes this unsustainable apart from the fact that oil, which is taken from somewhere, will rise in price, as will water resources, making sustainable city growth and development difficult. According to Brown (2001), the use of “flush and forget” water and sanitation systems will not be sustainable in the near future as the price of water and engineering systems needed for it to become portable continue to escalate.

5.2 Progress towards realising the goal

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

To achieve universal and equitable access to safe and affordable drinking water for all, the City implements several initiatives. Among others, the City makes significant investment in the development of water services infrastructure, the repair, maintenance and upgrading of rapidly aging infrastructure, and continuous connection of households to the water supply.

As a demonstration of its commitment to the achievement of this target and the overall objectives of the goal, the City extends the provision of water services to residents in informal settlements. In this regard, rudimentary water services are provided through water tankers and communal standpipes, albeit at a high provision cost. Furthermore, the City also implements the Indigent Policy which provides for the provision of free basic services, including water services. The implementation of this policy ensures that residents from indigent households in Tshwane are not excluded from access to water services, which speaks to the principle of leaving no one behind.

Despite many challenges that have impacted negatively on the achievement of the desired progress on the provision of sustainable, predictable and consistent supply of

quality water services to all the residents of Tshwane, commendable progress has been made over the years. According to the General Household Survey (Stats SA, 2022:35), in Tshwane, the percentage of households with access to piped or tap water in their dwellings, offsite or on-site, equals 97,1%. This is up from 94,9% recorded in 2020.

With regard to the provision of rudimentary water services in informal settlements, as a means of broadening access to safe and affordable drinking water, currently the City continues to seek new ways of providing water through non-grid water services while at the same time providing a constant supply of water through water tankers and standpipes, although this is not viable nor sustainable. As at the end of the 2022/23, a total of 148 known informal settlements were provided with rudimentary water services.

The City also took care of other critical enablers that promote access to a predictable and sustainable supply of safe and affordable drinking water. This included the provision of bulk water infrastructure and the installation and upgrading of the water network pipeline, thus extending the provision of water services to areas that previously did not have supply. It also invested in the construction and refurbishment of water reservoirs to meet the growing demand, which continues to be unsustainable as Tshwane is water averse. For example, cities like Aarhus in Denmark and those in Sweden use an average of 100 l per person per day, yet Tshwane uses 277 l per person per day, which makes it unsustainable and needs to change in terms of usage and behaviour. A study on the perception of residents on water and sanitation usage has been commissioned to co-develop a strategy on water by the Danish Government.

The status of water interruptions can serve as an indication of some of the efficiencies in the water provision system leading to insecurity of supply. In this regard, according to the General Household Survey (Stats SA, 2022:49), Tshwane was the third city with the least common water interruptions at 17,1% from a list of nine cities in the country. This is also indicative of efforts to promote a predictable supply of water services aimed at achieving the aspirations of this goal.

Other critical milestones achieved, which are indicative of progress in the City's efforts towards achieving universal and equitable access to safe and affordable drinking water for all, include the following:

- A total of 3 050 households were connected to water service points over the 2022/23 reporting year.
- Responding to water leaks (repairs) improved from an average of 14 days in the 2020/21 reporting year to nine days in the 2021/22 reporting year. This contributed to a reduction in water wastage, which is still at 32% as non-revenue water, perhaps one of the highest in the world.
- Installing water meters in unmetered houses, conducting meter audits to improve information on the billing system and replacing meters to increase accuracy in meter readings to avoid challenges that result from inaccurate billing.
- Conducting pipe network replacements and upgrading pipes in areas with worn-out network pipes. In this regard, about 14 672 m of worn-out network pipes were

replaced as part of the Selective Pipe Replacement Programme as at the end of the 2021/22 reporting year. Similarly, over the 2022/23 reporting year, a total of 24 774 m of water network pipes were upgraded.

- A total of 105 illegal connections were investigated and addressed across the seven regions of Tshwane, pointing to the intersection of social ills, like water theft and mismanaged water business.

5.2.2 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

The City recognises the centrality and importance of access to adequate and equitable sanitation and hygiene by Tshwane residents. The City's commitment to this imperative is evidenced by its emphasis on promoting access to sanitation services as part of its set priorities for many terms of government. In the City, it is acknowledged that access to safe and dignified sanitation services contributes significantly to securing human dignity, reducing health risks and protecting the environment. This realisation led to the City focusing on ensuring that households have access to flush toilets connected to a public sewerage system.

To achieve this, the City builds the essential sanitation infrastructure, connects households to sanitation services, provides rudimentary sanitation services to informal settlements, and upgrades and maintains the existing infrastructure. Currently, in Tshwane there are about 12 000 households that are still using the bucket sanitation system (Stats SA, 2022) and efforts are being made to address this undignified experience of residents, mostly residing in the informal sector.

The result of the efforts by the City towards ensuring access to adequate and equitable sanitation and hygiene for all can be seen in the form of the count of households that have access to improved sanitation. In this regard, 83,4% of Tshwane households had access to improved sanitation in 2020 (Stats SA, 2020). This increased to 85,2% in 2022 (Stats SA, 2022). This improvement is indicative of progress towards realising the commitment to ensuring access to adequate and equitable sanitation and hygiene for all.

5.2.3 Target 6.a: By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

The City entered into a partnership agreement with the City of Aarhus in May 2023. The partnership covers a three-year period from 1 April 2023 to 31 March 2026 with a budget of R33,7 million (as per the exchange rate of 12 April 2023). It focuses on water management with capacity development as one of the key priority areas.

The partnership is informed by the Danish Strategic Service Coordination (DSSC), developed by the Danish Foreign Ministry to support the implementation of SDGs in developing countries using mechanisms that have proven to be successful in Denmark. The key areas of intervention for this partnership include non-revenue water, waste water optimisation, own optimisation and a water security strategy.



The City is currently working on securing a partnership agreement with the Finnish Water Forum. According to the current discussions, the two parties will, according to their respective laws and regulations, cooperate in water resource management as it may relate to scientific, technological, training and economic aspects, and facilitate exchange programmes between them. The following areas have been identified mutually by the participants as high-priority areas of cooperation:

- Efficiency and sustainability in water resources utilisation, including challenges from climate change, water protection, circular economy and the sustainable use of biological diversity and ecosystem services
- Assistance and facilitation of projects in water resources management, municipal and industrial waste water treatment, sludge management, desalination, irrigation, managed aquifer recharge, digitalisation (smart water management) and circular economy-based products and services including education, innovations and business partnerships
- Technical cooperation on water safety and security, meteorology, monitoring, digitalisation, managed aquifer recharge and reduction of non-revenue water
- Education and training in water resources management
- Other areas as mutually accepted

5.3 Multiplier effect of the goal

The work done by the City to achieve indicators for Goal 6 assists in supporting progress towards achieving indicators for many other SDGs. Progress in the Goal 6 indicators has beneficial effects on indicators of other SDGs. Access to water and sanitation services plays a critical role in improving indicators of the social goals (Goals 1, 2, 3, 4 and 5). It is believed that a constant supply of water and access to sanitation services aid in improving the general health of residents. A constant supply of clean drinking water that is affordable contributes significantly to improve the health status of Tshwane residents as residents will use this water for cooking (Goal 2) and general household use. This promotes hygiene in the household, which contributes to improvements in health conditions and status (Goal 3).

Furthermore, access to water services within a reasonable distance plays a critical role in supporting gender-related indicators (Goal 5) as women and girls who generally assume the role of sourcing water from a water point, such as in the form of standpipes or water tankers outside a dwelling in the case of informal settlements, will be saved from exposure to vulnerabilities associated with sourcing water from a distance. This access to water services within a reasonable distance and access to water of good quality (clean and affordable) also serve as empowerment to women and girls who are enabled to use their time that would have been used to cover long distances over long hours to pursue other empowering activities, including studying to capacitate themselves (Goal 4).

In the examples provided above, it is evident that Goal 6 serves as a catalyst whose progress has beneficial effects on the other goals. The lack of data to demonstrate and support or prove the assertions made on how Goal 6 supports progress on other

goals is noted and is among the improvements that the City seeks to demonstrate in the next VLR cycle.

5.4 Key challenges

Despite the strides made towards realising the aspirations of Goal 6 as presented in the sections above, the City experienced many challenges. Among others, the challenges that derailed progress towards ensuring the availability and sustainable management of water and sanitation for all in Tshwane include the aging water and sanitation infrastructure that requires refurbishment at a very high cost. This causes frequent service outages.

The vulnerability of the water and sanitation infrastructure to vandalism is also one of the critical challenges that impact negatively on ensuring the availability and sustainable management of water and sanitation for all in Tshwane. The high cost of securing this infrastructure exacerbates the challenges that impede the achievement of the goal.

The City has no formal funding model on upstream developmental impacts that necessitate downstream mitigation measures.

5.5 Recommendations

In an effort to address the challenges presented above and to improve its performance towards achieving the goal, the City is implementing several interventions. Among others, these include the following:

- Exploring ways of protecting its service infrastructure to prevent theft and vandalism or to respond promptly to incidences of vandalism when they have occurred.
- Improving the financial situation of the City in order to ensure that its plans that serve the goal are adequately resourced.
- Strengthening the provision of water and sanitation services to broaden access to these services and sustain their provision.
- Exploring strategic partnerships with both local and international organisations to leverage the resources and capacity required to strengthen the performance of the City in all related result areas and to respond to presenting challenges. The example of the recent talk of an MoU between the City and the Finnish Water Forum is a good example of such a partnership.
- Exploring ways of protecting its ecological infrastructure through innovative changes in infrastructure design, like perforated surfaces to promote ground water recharge and artificial wetlands combined with reticulation ponds.
- Integrating the natural landscape within the detail designs of projects to promote sustainable development through the preservation of our ecological infrastructure.



Goal 7: Ensuring access to affordable, reliable, sustainable and modern energy for all

6.1 Goal description

Energy plays an important role in meeting everyday basic human needs. These basic human needs take the form of cooking, heating, warming, washing, lighting, cooling, powering appliances like televisions, washing machines, electric stoves or powering laptops or computers when one is working from home, etc. Energy services are also important in supporting and driving economic activities thereby contributing to the GDP of a country. Manufacturing, construction, smelting, welding, etc are also supported by energy.

The global system of energy production and consumption has been and will still face systemic challenges that have been centuries in the making. Further, Africa is also facing a major challenge in that about 65% (of the 1,1 billion) of its population have no access to electricity. By 2050, Africa's population is estimated to have grown to about 1,9 billion. Consequently, energy supply and access will continue to be major issues.

Most of our global energy needs still come from fossil fuels. Globally, the fossil fuel industry is under immense pressure to deliver increasing quantities of uninterrupted supply of energy from geological reservoirs that are old and depleting or from new ones that are energy intensive but expensive to develop. The energy system will see a battle between the geological depletion of fossils from an aging and eventually stranded set of coal assets and the rise of a nascent renewable energy sector chiefly driven by the fall in price and cost of renewable energy technologies, and pressure from environmentally ethic society, which will demand more and more energy from both sectors.

In South Africa, for example, years of underinvestment in the national energy infrastructure has resulted in rolling power blackouts and the shedding of the load, impacting economic and social aspects of life. This is apart from the global pressure for countries to decommission coal-powered fire stations towards carbon neutrality to address the impacts of climate change.

The aim of Goal 7 is to ensure access to affordable, reliable, sustainable and modern energy for all people globally. The goal emphasises the production of clean energy as cities or countries of the world pursue ensuring access to affordable, reliable, sustainable and modern energy for all people. It is believed that promoting and ensuring access to an affordable, reliable, sustainable supply of clean and modern energy assists in mitigating health and environmental hazards. In 2019 alone, about 84,3% of the world's primary energy consumption came from coal. The burning of coal to produce energy generates greenhouse gas emissions into the troposphere. Carbon dioxide, sulphur, nitro-oxide, etc are a few examples of greenhouse gases causing environmental deterioration. Other environmental problems related to environmental deterioration and the resultant climate change have been the noted rise in sea levels, extreme heat and droughts, monsoons and so forth.

6.2 Progress towards realising the goal

6.2.1 Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services

South African cities are obligated to provide energy to all residents as one of the constitutional mandates. To this end, the City's Energy and Electricity Department has a mission to provide dependable, safe and sustainable energy and electricity to meet the needs of all its customers (residents). Hence, the promotion of universal access to affordable, reliable and modern energy services by the City to meet human needs has always been part of the key priorities of the City. This recognition of the importance of access to affordable, reliable, sustainable and modern energy for human needs and imperatives of sustainable development has made the City commit to key energy development and supply programmes as well as priorities that promote access to electricity based on time-bound citywide action plans. These interventions or programmes include the Free Basic Electricity Programme, Electricity for All Programme, New Connections Programme and the Infrastructure Development and Maintenance Programme, which all form part of the efforts to meet universal access to affordable, reliable and modern energy services by 2030 in Tshwane.

The practical action plans conducted by the City to translate the initiatives, priorities and programmes into broadening access to affordable, reliable, sustainable and modern energy to all include, among others, the provision of full-service connections to areas without access to electricity. In order to ensure universal access to affordable, reliable and modern energy services by 2030, the City connected electricity to the following areas in 2022:

- Boikhutsong
- Changing Spot
- Ekangala Ext A to F
- Ga-Rankuwa View (Beverly Hills)
- Ga-Rankuwa Zone 14 and 21 (Bridgeview)
- Hammanskraal Ext 10
- Itsoseng 702-JR (Mabopane)
- Jwaaga
- Koos Delray
- Kopanong Ext 1 (Itsoseng Phase 1)
- Mabopane EW
- Mabopane Ext 1 and 2
- Mabopane Sun Valley Block S
- Mamelodi Ext 6
- Mery Me
- Nellmapius Ext 22
- Rama City
- Refilwe Ext 10
- Rethabiseng
- Shobede
- Small View Ext 10
- Soshanguve 3B

- Soshanguve Block KK, MM and R
- Soshanguve Ext 11, 12, 14, 19 and 20
- Wonder City
- Zithobeni Ext 3, 8 and 9
- Zithobeni Heights

The majority if not all of these areas are located in townships (high house density and low-income suburbs) that are historically economically disadvantaged. In 2022, the total number of domestic consumer units in Tshwane to which the service is provided was 452 499.

Other practical action plans implemented by the City to translate the initiatives, priorities and programmes to access affordable, reliable, sustainable and modern energy to all are –

- reticulating electricity into low-cost housing areas;
- developing bulk infrastructure;
- installing embedded energy generators on the municipal distribution network;
- strengthening the electricity network infrastructure;
- ensuring public lighting to promote a lit city;
- promoting sustainable power projects by entering into power purchase agreements and wheeling agreements with alternative energy producers; and
- effectively managing the City's energy supply to distribution losses (technical and non-technical).

The City is currently suffering from a severe energy crisis which greatly impacts its industrial manufacturing, residential and all other key aspects of the local city economy. This impacts on the competitiveness of local city economies and its capabilities mainly due to energy capacity constraints and continually rising energy prices. The increase in energy prices is entirely related to historic underinvestment in capacity. The installed fleet of power stations nationally is insufficient to meet the growing demand for electricity in local municipalities like Tshwane in a cost-efficient manner, so coal plants dotted around the country with high variable costs originally designed for peaking are now being used extensively, impacting Tshwane's local economy.

Against the energy macro background presented above and despite countless challenges that the City experienced which impacted negatively on meeting the level of economic and social results required, commendable progress with a significant contribution to ensuring universal access to affordable, reliable and modern energy services was made and the progress is presented below according to the selected and relevant SDG indicators.

6.2.2 Indicator 7.1.1: Proportion of population with access to electricity

Municipal electrification in South Africa started with Rondebosch Local Municipality in 1892. Thereafter, most municipalities in South Africa were electrified. In July 1894, Siemens and Halske received a concession from the South African government to supply electricity to Johannesburg and Pretoria, now known as Tshwane. To give some indications locally for South Africa, while the percentage of South African

households that were connected to the main electricity supply increased from 76,7% in 2002 to 85% in 2019, a lot of households (15,5%) remain unconnected (Stats SA, 2019).

The percentage of households that used electricity for cooking increased from 57,5% in 2002 to 79,9% in 2014, before declining to 75,1% in 2019 (Stats SA, 2019). Simultaneously, the use of paraffin, coal and firewood declined notably (Stats SA, 2019). However, progress has been noted regarding the percentage of households that used paraffin which declined from 16,1% in 2002 to 3,9% in 2019, while the percentage of households that used firewood decreased from 20% to 7,8% (Stats SA, 2019). The percentage of households that used gas increased from 2,2% in 2002 to 4,2% in 2019 (Stats SA, 2019).

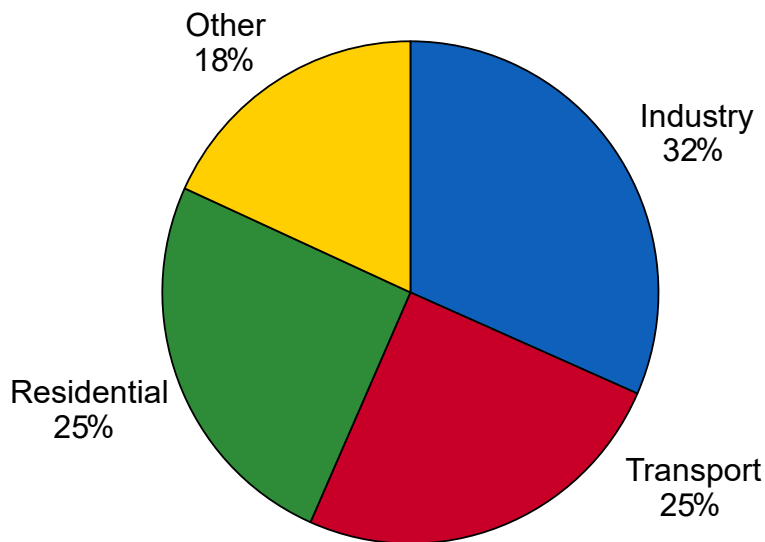


Figure 3: South Africa's energy usage by sector, 2009

Today, and in further promoting access to electricity by residents, the progress made, among other things, entails the connection of a significant number of households to different sources of electricity, with most households now at 73,7% using prepaid meters, followed by 20% of households using in-house conventional electricity meters and the least common source being "other sources" used by only 6,4% of households (Stats SA, 2020).

In terms of the households connected to the main electricity supply, despite many challenges experienced that have had a significantly negative impact on the progress aspired to, the City connected 1 253 households to the main electricity supply at the end of the 2021/22 financial year, which brought access to electricity for lighting to 92%. As part of its ongoing focused efforts to broaden access to electricity services, the electrification of informal settlements is also ongoing.

In pursuit of promoting access to electricity, as a support intervention that contributes to access to electricity, the City is also embarking on expanding, upgrading and maintaining the electricity infrastructure. In this regard, the progress made includes refurbishing many substations, which among others include the Soshanguve 132/11 kV Substation and Bronkhorstspuit 132/11 kV Substation, as well as the construction of Kentron 132/11 kV Substation. Wapadrand 132/11 kV Substation and Mooikloof

132/11 kV Substation are in progress to provide electricity to different nodes of Tshwane in support of earmarked developments and connectivity. Upon completion of the construction of these substations, the City will have 93 primary 132/11 kV substations as part of the network.

Although there have been many impediments affecting the progress that the City would like to achieve towards realising universal access to electricity, the progress made is indicative of good strides which, if the performance improves continuously, the City will be on course with its contribution to meeting the set energy targets.

6.2.3 Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix

6.2.3.1 Indicator 7.2.1: Renewable energy share in the total final energy consumption

Introduction

The energy sector is perhaps the largest contributor of greenhouse gas emissions in the world. South Africa is among the most coal-dependent countries in the world when it comes to energy production. When greenhouse gases are added into the troposphere, through for example the burning of coal, they cause the deterioration of the natural environment. One of the main signs of the deterioration of the natural environment has been the significant change in climate. Worsening air quality due to greenhouse gas emissions in the atmosphere has had negative impacts on human health. The disproportionate impacts on climate on the poor over the rich, who least contributed to changes in climate, is a cause for concern.

Over the last decade or so there have been several efforts located at various scales aimed at addressing climate change mainly caused by the energy sector, which have manifested through different international agreements and strategies striving for a sustainable and resilient future. Indeed, the transformation in energy generation and supply has seen a fundamental shift in recent years targeted by the movement from high-carbon to low-carbon sustainable energy systems. In South Africa, for example, there are clear signs that the dominant coal-powered conventional centralised energy system has started to show signs of dismantling and the transition to a low-carbon sustainable energy system is well underway.

Towards the democratisation and security of reliable and sustainable energy supply in Tshwane

Municipalities like the City have a key continual obligation and a role to play in the democratisation and security of reliable and sustainable energy supply. This entails a transition of the sector from an entirely top-down centralised system to a sustainable low-carbon decentralised system that deploys energy security, one in which investment and job opportunities are closer to the people, but also ensuring access to an affordable and secure supply. It also demands a transition to renewable energy systems.

Ministerial Determination 34 on the Renewable Energy Independent Power Producer Programme and the new electricity generation regulation (Schedule 2 of the Electricity



Regulation Act, 2006 (Act 4 of 2006)), which has recently been amended are all meant to enable the local government to procure electricity directly from independent power producers, subject to the usual generation licencing requirements, and will ensure a balanced power supply by enabling the establishment of the necessary institutional capacity, legal frameworks, tariff structures, financing mechanisms and electricity supply planning.

The City is undertaking the required steps to engage in power purchase agreements with independent renewable energy power producers. Further, the City plans to encourage the development of renewable energy-generation capacity within its distribution grid as both distributed generation (for sale to the grid) and embedded generation (behind the meter, for own use). This supports a range of different projects, such as renewable energy development on City-owned land and buildings, small-scale distributed independent power producers selling power to the grid through power purchase agreements and small-scale embedded generation, including mini-grids.

The City has enlisted the services of the research organisation, the CSIR, to conducting a study on “Electricity Pathways for the City of Tshwane: Minimising Electricity Costs while Improving Energy Security and Decarbonising Power Supply”. This study is a feasibility study meant to evaluate the most appropriate energy technology solutions or options and points on the grid to connect alternative energy (energy grid study). Table 7 below presents a list of renewable energy technologies that are being considered by the City (through the two-legged CSIR study) for procurement.

Table 7: List of alternative and renewable energy technologies being considered by the City

Number	Possible alternative or renewable energy technologies
1	Solar photovoltaic plant
2	Rooftop solar panels
3	Concentrated solar power
4	Onshore wind
5	Landfill gas
6	Biogas
7	Biomass
8	Small hydropower plant
9	Any of the above combined with battery storage systems

The ultimate outcome of the study is to develop the City of Tshwane Electricity Master Plan with an optimal energy mix. However, it is crucial that the City has a long-term renewable energy vision, which accommodates technology disruptions, enables private sector innovation, promotes compliance and provides a straightforward process for legal small-scale renewable energy connections. This will ensure that the City benefits financially while also reducing emissions. These types of projects require an enabling policy environment and clear processes within the City’s Energy and Electricity Department.

To ensure a balanced power supply, the City has established the necessary institutional capacity and legal frameworks through the Tshwane Energy Task

Committee, and still needs to develop the needed tariff structures, financing mechanisms (market) and electricity supply planning.

Further towards a net zero economy, the City has issued a Request for Information from potential independent power producers to generate for base and peak load. The Request for Information target is a combined 1 000 MW from various sources, such as renewable and cleaner technologies. Concurrently, the preliminary grid review is being conducted by the CSIR on the potential grid tie points for the independent power producer solutions from the Request for Information above.

Lastly, the City's Energy and Electricity Department has drafted an energy wheeling policy. The policy is expected to primarily facilitate the power purchase agreements between a generator or an independent power producer and an offtaker(s) who may or may not be directly connected to the City's grid.

6.3 Key challenges

Below are some of the challenges experienced in pursuit of Goal 7:

- **Shedding of the electricity load:** The pace of adding new generation capacity in line with the Integrated Resources Plan 2019 has not kept pace with Eskom's deteriorating plant performance. Consequently, South Africa, and by extension Tshwane, continues to experience load-shedding which harms Tshwane's economy. This in turn creates uncertainty and risk in the City when planning for future growth or reviewing city sustainability and profitability outcomes. The shedding of the load was halted by an extended lockdown where a risk-adjusted strategy was implemented in response to a growing COVID-19 pandemic but returned in the winter months and remained present for the last half of 2020.
- **Rising electricity prices:** The average wholesale electricity tariff in South Africa has been increasing steeply for the last decade and it rose with a further 15% in 2022. These rising electricity prices, added to the already described energy security concerns, have resulted in a range of challenges for municipalities in South Africa, and the City is not spared. This has prompted some of the municipalities to seek alternative energy solutions, including maximising energy-efficiency opportunities, deploying backup emergency supply options, looking to supplement Eskom wholesale offtake and enabling embedded generation options such as solar photovoltaic for customers. The rise in the cost of electricity has seen commercial businesses leave the electricity grid, impacting the City's revenue, as well as the rising number of customers who default on payments due to the unaffordability of the energy services rendered.
- **The crisis of skills required for decentralised electric systems or the transition to alternative energy is clear and needs to be urgently addressed.**

6.4 Multiplier effect of the goal

The achievement of Goal 7 enables the potential achievement of many other goals in the City.

The availability of secure energy enables grid water to be pumped into the areas needed by residents. Hence, the energy-water nexus has become one of the most critical aspects in recent years whereby the shedding of energy by the City and Eskom meant that Rand Water is unable to pump water (Goal 6) from the reservoirs, as mechanical pumps need energy to pump grid water to where it is needed.

Further access to electricity plays a critical enabling role in making cities and human settlements inclusive, safe, resilient and sustainable (Goal 11). When communities or households are connected to the main electricity supply, they are empowered to meet basic human needs (cooling, cooking, heating, etc). These few multipliers are made possible through electricity connections that contribute significantly to Goals 2, 3 and 11 in many ways.

Public lighting is provided as part of the efforts aimed at ensuring that settlements have access to electricity, contributing to deterring criminal activities that occur in the dark where visibility is reduced. Energy and electricity thus contribute to making settlements safer for residents.

A lack of energy security due to rolling blackouts means impacting on stable and predictable economic production, decent jobs and Tshwane's GDP. The City is yet to quantify the amount of local economy wiped out by load-shedding and disruptions to the local production of goods and services.



Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

7.1 Goal description

The Malthusian report, *Limits to Growth*, of 1972 projected an urbanisation growth rate slower than the actual rates observed in the world today. In the 1800s, cities of a million and more people were virtually unknown. But coal-fired industries drew people together. There are now over 400 cities with a million or more people each and they are projected to increase to over 550 by the 2050s, yet these cities were only a paltry 86 in the 1950s. Currently, cities are growing by a million babies and migrants weekly and indeed cities have taken about two-thirds of the current global population, which has exploded since the 1950s.

According to Mike Davis (2004), about 95% of this growth will happen in cities that are least prepared to deal with the phenomenon, cities of developing countries, and that the severity of the climax of the situation of this third wave of urbanisation challenges could be felt somewhere in the 2050s. Asia, Africa and South America are the continents where this urbanisation explosion will happen. According to Davis (2004), during that time, cities will account for an all-future world population growth.

This growth will happen in the face of declining economic growth opportunities in most cities as urbanisation will continue to decouple from industrialisation. This is the tendency of silicon capitalism and revolution to delink economic growth from employment. The real danger in an urbanising city is not in the actual explosion of the urbanisation phenomenon *per se* but in the depletion of the natural capital of their local and regional hinterland where they get their critical resources for survival and sinks for wastes. The ultimate sustainability and survival of cities have always been a great issue as the history of ancient cities has now shown.

If one looks closely at the challenges of unsustainable cities, one is looking at urban theory and sustainable development policy that marry equality, urban economics and sustainability in the areas of water, sanitation, land and space, transport, congestion and pollution, energy, informal settlements and slums, solid waste management, public health, biodiversity and recreational services.

Goal 11 has a specific focus on sustainable human settlements and communities' urban settings. The city of Curitiba (Brazil) is one of the cities at the cutting edge of new urbanism. Curitiba also prides itself on the fact that in 2010, it was awarded the Globe Sustainable City Award. For example, Curitiba has a sense of a place through its great transportation system and urban planning. Curitiba is a symbol that represents those cities and municipalities of the world that excel in sustainable urban development goals.

7.2 Progress towards realising the goal

7.2.1 Target 11.1: By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

Introduction

According to the first truly global report on human settlement, the UN-Habitat, as urbanisation continues, there is evidence that there is no real city planning for such an anticipated increase in the urban population. According to Davis (2003), this is in terms of land, space, food and city infrastructure, including routine systems maintenance. There is no way in which such cities are and will become sustainable in the near future. Indeterminacy of land titles and/or lax state ownership, in the last instance, are the cracks through which a vast majority of humanity has poured into the cities.

While cities are designed at national level, delivery of services happen at city level. Hence the call to make cities and human settlements inclusive, safe, resilient and sustainable has over the years received focused attention. In the face of continuing urbanisation and in trying to address the inadequacies created by rapid growth of people in cities towards an attempt to ensure access for all to adequate, safe and affordable housing and basic services, the City implemented various programmes and recorded notable progress.

There is an increasing recognition that targeted action must be taken to promote sustainable cities and communities at large. Despite a set of challenges that the City has been confronted with, commendable progress has been made towards realising the set targets and aspirations of sustainable cities and communities. This is evidenced by the ongoing implementation of various programmes prioritising the allocation of its resources.

Among others, such interventions include the pursuance of transformative spatial planning approaches, human settlement developments and servicing recognised informal settlements. According to Davis (2003), there is nothing wrong with having slums in cities as it is a form of urbanism. The challenge of slums will happen to cities that are least prepared to deal with the two basic issues facing such areas, namely basic housing and service infrastructure, which is the most unsustainable part.

7.2.2 Indicator 11.1.1D1: Percentage of urban population living in informal dwellings

According to Census 2022 data issued by Stats SA, the number of households in Tshwane is 1 322 252. Informal dwellings account for 13,1% of these households. In Tshwane, the growing demand for human settlements is manifestly observed and evidenced by the ever-growing increase in the number of recorded informal settlements, which in itself is a result of rapid rates of urbanisation which is in line with other cities, mainly in Asia, Africa and Latin America where, according to Girardet (2004), an urbanisation explosion will happen. With rapid urbanisation, this trend poses many challenges, which among others include the provision of services to meet demand.

In its efforts to make informal settlements liveable, the City implements a variety of programmes and initiatives. Among others, these include the provision of rudimentary services like water, sanitation and electricity which provide much-needed relief and access to life-supporting services, formalisation of informal settlements (reblocking) and provision of roads and storm water services.

Notwithstanding the challenges experienced, the City made progress in servicing informal dwellings. In this regard, a total of 91 informal settlements have been rearranged or reblocked with upgrading plans in place and at various stages of formalisation. In cases where upgrading plans have not commenced and/or are in the process of implementation, the households are provided with rudimentary or interim services. The City undertook to formalise 30 informal settlements in 2023 from only one in 2018, which have been provided with water and sanitation. Furthermore, 56 informal settlements are currently at the township establishment stage (Phase 2) of formalisation.

7.2.3 Indicator 11.1.1D2: Percentage of urban residents having access to basic services within informal dwellings by type of service

The question of access to services by citizens served by a city plays a critical role in measuring how services offered by cities reach citizens, a precursor of the effectiveness of the public policy based on the economic and ecological sustainability of a city.

The City's strategic position is to place access to basic services at the centre of City priorities. Ensuring that Tshwane residents residing in informal dwellings have access to basic services is one of the key service delivery focus areas of the City. The provision of this access is expressed in the form of delivering a constant supply of predictable rudimentary services like water, sanitation, waste collection and electricity. These services are provided through water standpipes, water tankers, chemical toilets and routine waste collection and disposal, including the clearing of illegal dumping sites, which is not sustainable and cost-effective in most cases.

The table below presents progress made over the period under review regarding the provision of rudimentary or interim services that attempts to alleviate some of the challenges experienced by people residing in the informal settlements of Tshwane.

Table 8: Access to basic services within informal dwellings by type of service

Service type (key performance indicator)	2018/19	2019/20	2020/21	2021/22	2022/23
Percentage of known informal settlements receiving basic refuse removal services	-	-	35%	92%	100%
Number of informal settlements with access to rudimentary sanitation services	68	82	101	108	108
Number of informal settlements with access to rudimentary water services	179	182	138	150	148

Source: City of Tshwane archives

7.2.4 Target 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

Worldwide, cities are facing the unsustainable challenge of increasing automobile use, pollution and other challenges. One of the most unsustainable factors in cities has been the use of fossil fuels to fuel four-stroke vehicles. The rate of use of fossil fuels and the resultant high carbon footprint of transportation in cities has been increasing. From 1960 to 2000, the total amount of carbon dioxide emissions has increased from 2,5 billion to 6,2 billion in line with global industrialisation, urbanisation and expansion of transport system mobility.

This development has been disappointing as cities are seen as centres of knowledge, cultures and progress in trade and development. The twin evils of carbon emissions have caused air pollution challenges and in some cities contributed to the amount of smog, which has caused acute respiratory problems, increasing public expenditure on health issues. Such developments have been very unsustainable from a number of perspectives. This has arbitrarily been described as senseless development and development copying unsustainable ways, which goes against good morals.

As much as determining the liveability of cities, a transportation system fundamentally determines land use and the physical form of urban areas.

The City recognises that an effective and efficient transportation system is the engine of economic and social activities in all urban communities. Over the years, the City has experienced a large increase in road traffic and transport demand due to various factors like demographics and an increase in the demand for goods and services. This implies that the demand for transport by users or commuters is not only directed to the use of the service for its direct benefits, but also as a mechanism to access other services.

Consequently, this could lead to the deterioration of road infrastructure and an overwhelmed transport system. With a city as geographically expansive as Tshwane, it is critical that there is a dedicated effort to ensure that there is an integrated transport system that promotes interconnectedness, reduces traffic congestion, enables service delivery and, most importantly, ensures convenient access to public transport by all residents. This also takes into consideration the provision of reliable, affordable public transport services, which are used in Tshwane.

7.2.5 Indicator 11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities

While the City does not have reliable (accurate, complete and valid) data disaggregated to respond directly to all the variables of the indicator, reasonable strides have been made in providing convenient access to public transport services by all residents of Tshwane, despite many challenges experienced in the process.

The City has demonstrated its commitment to the provision of a convenient, affordable, safe and reliable transport system for all residents. In fulfilling this commitment, the

City coordinates and facilitates the planning and implementation of an integrated transport system. The narrative in the City is that an effective transport system and efficient transport services (transport connectivity in particular) remove geographical barriers, support core economic activities and enhance the productive capacity of the economy.

Both Porto Alegre and Curitiba, southern Brazilian cities, are widely cited as good examples of urban sustainability. After conducting a mission to and using the Curitiba example of a rapid transit system, the City constructed dedicated bus lanes that support the integrated rapid public transport system. The City is also intentional about continuously promoting a positive experience when passengers use the public transport system. There is also a greater consideration of people living with disabilities when planning and operating the City's public transport system. This is expressed in terms of ensuring that the applicable fleet of buses is used and that bus stops are disability friendly.

Following the Curitiba example, the City provides access to convenient public transport to all residents by –

- upgrading modal fleet facilities, stops and stations;
- using a universally accessible bus fleet and stations;
- ensuring that public transport facilities cater for people with special needs (people living with disabilities, the elderly, etc);
- promoting safety and security in public transport operations;
- integrating public service networks, including facilities for walking, cycling and the taxi network;
- integrating electronic fare collection; and
- providing public transport that reduces journey times and ensures that the public transport system operates on all routes, connecting people and communities to each other and people to areas of employment and economic activity, as well as to facilitate and promote the ease with which goods and services are moved around.

The other notable success contributing to the realisation of the indicator based on the Curitiba example is that the City is making positive strides in implementing the Integrated Rapid Public Transport Network. As part of the Integrated Rapid Public Transport Network, the City implements the Tshwane Rapid Transit programme as one of the catalytic public transport interventions. Tshwane Rapid Transit is a bus rapid transit public transport service that runs on designated lanes and is faster than other forms of public transport.

The Tshwane Rapid Transit integrates with other modes of transport across Tshwane through transfers from one mode to another, inclusive of minibus taxis, Tshwane Bus Services and the Gautrain, which is a high-speed express train. Over the years, since the introduction of this rapid transport system, the City has realised a reasonable reduction in traffic congestion and pollution around Tshwane. This was achieved through rigorous adherence to the preventative and corrective maintenance of the urban traffic control system requirements all along bus rapid transit routes in and around the Pretoria Central Business District (CBD).

Since the introduction of Tshwane Rapid Transit, the following milestones have been achieved, namely operating a total of 12 fully functional stations that feature dedicated bus-only lanes that enable the connection of many key areas of economic and social activity in Tshwane. In collaboration with the Tshwane traffic service exercising their traffic control duties, 90,76% of Tshwane Rapid Transit buses adhered to the scheduled travel time. Also, the City ensured maximum universal accessibility of bus service stops for Tshwane Rapid Transit buses that are low entry.

The City also operates another bus service covering 92 routes radiating from the Pretoria CBD, with an average route length of 14 km. Weekday bus services are provided over 14 hours, with the first service at 04:15 and the last service at 19:40. On Saturdays, the service runs over a period of eight hours. The morning peak headways range from 5 minutes to 30 minutes. The operations are within reach for commuters at a maximum radius of 30 km from the Pretoria CBD. The bus routes also comprise school routes. Daily, the City operates a total of 920 planned trips, which is comprised of 160 shifts.

7.2.6 Target 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage

7.2.6.1 Indicator 11.4.1: Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal)

While the City has difficulty quantifying and accounting for the expenditure incurred in protecting and safeguarding its cultural and natural heritage, various interventions and programmes are implemented to preserve, protect and conserve all cultural and natural heritage sites.

The City focuses on –

- conserving biodiversity;
- managing nature reserves and nature areas in line with applicable legislation;
- protecting the natural environment;
- conducting conservation education and awareness, information-sharing and capacity-building;
- protecting animal species;
- managing cultural resources;
- implementing alien vegetation control programmes;
- conducting wetland conservation through education programmes; and
- developing and conserving greenbelts and natural assets in new and existing residential settlements.

There is also a greater focus on maintaining cultural and natural heritage-related infrastructure.

Acknowledging the effectiveness of partnerships in maximising the impacts of development programmes, the City entered into an MoU with the Wildlife and Environmental Society of Southern Africa (WESSA) through the Friends Groups Programme to collaborate and partner on conservation initiatives. This collaborative



partnership is expressed through activities that include conducting clean-ups (picking up litter), removing alien plants, conducting educational walks and talks, providing feed for animals, monitoring and reporting sewer spills and illegal developments, and maintaining and developing infrastructure like fencing.

7.2.7 Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

7.2.7.1 Indicator 11.6.1: Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities

Although the City experiences data availability challenges that hinders its ability to account for the proportion of municipal solid waste collected and managed in controlled facilities out of the total municipal waste generated, waste collection and management is one of the critical priority service delivery interventions of the City that contributes significantly towards the realisation of the objectives of this goal, its targets and indicators.

In this regard, the City implements a solid waste management programme benefiting residents residing in formal and informal dwellings. This waste management programme includes collecting and transporting general waste to disposal sites on a weekly basis, which is unsustainable as waste is not separated at source, Further it also provides a bulk waste collection service, manages waste disposal facilities, prevents and clears illegal dumping to prevent environmental pollution, and implements waste minimisation and recycling strategies to reduce the demand for landfill sites. Promoting compliance of landfill sites with licencing requirements is also at the centre of the City's commitments relating to waste management.

Tonnes of solid waste are collected weekly following a weekly schedule of waste trucks that cover all the settlements (formal and informal) in Tshwane and is disposed of at landfill sites that are kept compliant with licence conditions. In this regard, the City provides refuse collection services to 2 338 formally registered and proclaimed areas and to 172 informal settlements at least once a week. Weekly waste removal services are provided to business customers using green 240 l and 1 000 l capacity bins. Additionally, bulk waste removal and on-site waste management services are also provided through bulk containers (skips) and 20 m³ containers for residential households, industries, hospitals, garden waste sites and corporate buildings on a daily or weekly basis. Organic waste is made into compost and sold to small-scale farmers.

Most of the City's landfills are running out of shelf life, with the maximum only left with four years, yet the separation at source programme (sustainable waste management) has not been fully rolled out, creating fears that it will create landfills 30 km to the north of Tshwane, adding to unsustainable waste management. Currently, the City has a total of four operational landfill sites while the other six are permanently closed. These waste disposal sites are carefully managed to protect the environment from contaminants which may be found in the waste stream. It has been observed that the City's landfill sites are wildly reaching the limits of their capacity.

It is for this reason that the City implements other recycling initiatives through the operation of waste buy-back centres. These buy-back centres operate as satellite waste stations and assist the City by ensuring that all recyclable materials are reclaimed in a scalable manner. This intervention contributes significantly to the City's waste recycling initiatives. As of 30 June 2023, a total of 3 559,23 tonnages of waste was diverted from municipal landfill sites to the municipal waste buy-back centres. This a step in the right direction, though figures are still small given the current capacity status of the City's landfill sites.

7.2.7.2 Indicator 11.6.2A: National Air Quality Indicator (NAQI) (new indicator)

In managing the harmful effects of air pollution, the City implements sustainable air quality management practices which, among others, include industrial emissions compliance with the current National Ambient Air Quality Standards for PM10, SO₂, NO₂, O₃, CO. This is done through the issuance of atmospheric emission licences to all industries operating within the boundaries of Tshwane and annually auditing industrial emissions, which is enforced through the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) and the National Atmospheric Emission Inventory System (NAEIS).

Furthermore, the City undertakes environmental legislative compliance inspections and enforcement using its Environmental Management Inspectors, also referred to as the Green Scorpions. Through this intervention, proactive and reactive environmental compliance inspections in industries and corporate facilities are conducted. In cases of non-compliance, environmental administrative enforcement actions are taken through the issuing of compliance notices and directives. The City also responds to environmental incidents and disasters in terms of Section 30 of the National Environmental Management Act, 1998 (Act 107 of 1998).

One of the notable initiatives that seek to reduce the adverse per capita environmental impact undertaken by the City include initiating an intervention in relation to sustainable and clean mobility for the community of Tshwane where the City began its low-carbon interventions in 2015. Through this intervention, ten electric vehicles were purchased to add to the messenger fleet, an effort that demonstrates the City's commitment to clean mobility and improving air quality.

7.3 Multiplier effect of the goal

In Tshwane, the interventions implemented in support of realising the objectives of Goal 11 have a major effect on the realisation of some other goals. These interventions have proven to advance progress in other goals and there have been gains observed in affected and interlinking goals.

The interventions pursued by the City in its efforts to realise the aspirations of making Tshwane and human settlements inclusive, safe, resilient and sustainable inextricably link to Goal 9 in as far as the development of local infrastructure that supports sustainable, inclusive, safe and resilient human settlements is concerned. In this regard, developing roads and transport infrastructure, building reservoirs and water treatment plants in localities and providing housing and serviced stands make a significant contribution to the realisation of Goal 9 targets, which focus on building resilient infrastructure.

Also, the City provides rudimentary water and sanitation services to residents residing in informal settlements in pursuit of alleviating the challenge of informality and connects households to the main water and electricity supply, which are critical interventions that support the realisation of sustainable cities and communities, especially as this relates to access to adequate, safe and affordable basic services and contributes significantly to the achievement of the objectives of Goals 6 and 7.

The provision of rudimentary services (water and sanitation), the formalisation of informal settlements and the reblocking or dedensification of informal settlements contribute significantly to Goal 10, responding to the need to address the needs of deprived neighbourhoods and the informal sector. In this regard, the City provides basic water services in informal settlements through water tankers, benefiting households and individuals residing in the recognised informal settlements.

The provision of water and sanitation services, which is a critical action undertaken to respond to Goal 11, also makes a positive contribution to Goal 3 as it responds to this goal's aspirations of promoting healthy living opportunities through greater access to clean water and quality sanitation. Furthermore, the reblocking of informal settlements to make them liveable is a significant contribution to the aspirations of Goal 3 as it enables the City to provide mobile clinic services in informal settlements, which is a critical health and well-being intervention. Improving air quality and protecting environmental degradation, which if it manifests may have devastating effects on the health and well-being of residents, also aligns to and supports the achievement of the objectives of Goal 3.

7.4 Key challenges

Despite the progress made in implementing its programmes that are aimed at making the target city and human settlements inclusive, safe, resilient and sustainable, the City continues to experience many challenges. The effect of the challenges experienced impacted negatively on the desired progress.

Therefore, there is a need for the City to deal with an ever-increasing backlog in the provision of services. Some of the challenges that the City experienced include the devastating impact of the outbreak of the COVID-19 pandemic that negatively affected many of the City's plans and derailed progress on many performance areas of the City. The City is also faced with financial issues, intensifying its inability to deliver according to demand. Aging infrastructure exacerbated by a limited budget for planned repairs and maintenance is another issue in the City, as is high water losses due to the aging infrastructure.

The City is also faced with high technical and non-technical electricity losses. Illegal connections to services (electricity) overburden the already strained infrastructure and cable theft impacts negatively on the consistent and predictable supply of reliable electricity in affected areas. Infrastructure vandalism leading to service outages which are exacerbated by a limited repairs and management budget is another issue. The City has also been facing illegal dumping for years caused by the continuous increase in informal settlements, causing an increasing demand for unplanned services.

7.5 Key recommendations

The City is exploring ways of protecting its infrastructure to prevent theft and vandalism, and to respond promptly to incidents of these happening.

The City is also improving its financial situation to ensure that its plans that serve the goal are adequately resourced.

The City is also intensifying the provision of basic services to broaden access to these services and sustain their provision.

The City is driving a robust growth and development agenda (infrastructure development, laying a solid foundation for the economic development and creation of job opportunities) that will impact positively on making the City and communities sustainable.

Key recommendations include the following:

- Smart cities/ICT Tech to Transport
- Urban ecology
- Expanding the bus rapid transit system
- Separation of waste at source (three bins)
- Bike tracks and cycles
- Permeable surfacing, not hard surfacing and paving
- Sustainable urban drainage system
- Alternative energy
- Alternative off-grid sewer system



Goal 13: *Take urgent action to combat climate change and its impacts*

8.1 Goal description

Goal 13 is aimed at ensuring that the right action is taken to combat climate change and its devastating effects or impacts. The goal compels actors from both public and private spheres or institutions to act urgently in implementing interventions that will prevent climate change and keep climate change-related hazards at bay.

As a means to combat climate change and its impacts, the goal calls for –

- strengthening resilience and adaptive capacity to climate-related hazards and natural disasters;
- the integration of climate change measures into national policies, strategies and planning; and
- the improvement of education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

The critical rallying point of the goal is action orientation meant to prevent climate-related hazards and limit the effects or impact of these hazards.

In the City, it is believed that confronting climate change is an urgent matter which requires unwavering dedicated efforts that place an emphasis on sustainability and urgent action. It is also acknowledged that climate action is highly connected to the work and interventions that serve other goals in many ways. This connectedness of climate action to other goals is evident in other global binding treaties, including the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, the Doha Amendment and the Paris Agreement, to mention just a few.

8.2 Progress towards realising the goal

In terms of the institutional makeup of the City, while climate change-resistant interventions, programmes and activities are meant to be a concern for implementation in every functional area and activity driving all aspects of the business of the City, the City created the City Sustainability Division delegated with the task of driving climate change interventions across the business operations of the City.

In this regard, the City's climate action programme is based on the understanding that while climate action is about creating a low-carbon, climate-resilient environment by reducing greenhouse gas emissions, investing in renewable energy, and implementing and continuously improving climate-adaptation measures, it also involves empowering individuals, communities, residents, business and organisations to make informed decisions and empower them with the necessary skills and capacity to manage climate risks.

To promote this ideal, the City's efforts include disaster risk assessments and disaster response and recovery. The City further focuses on education and awareness as well

as implementing a system of early warnings. Furthermore, the City dedicates its efforts in developing and implementing climate-resilient policies, strategies and programmes with focused actions that reduce vulnerabilities.

8.2.1 Targets 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Although there is a long way to go to achieve resilience and adaptive capacity to climate-related hazards and natural disasters, the City is making strides despite many challenges that derail the achievement of the required progress. Some of the notable strides include the development and implementation of a suite of guiding instruments which include the following:

- City of Tshwane Climate Action Plan approved for implementation in June 2022, which guides the City's efforts in mainstreaming climate action in the business of the City and its operations
- Green Building Development Policy of 2009 and the Green Building Development By-Law enacted in 2021, which provide guidance and directives as well as standards on actions that reduce environmental impacts and enforce compliance with those directives and standards, respectively
- Sustainable Financing Strategy for Green Economy Transition (Sustainability Financing Mechanism Strategy)

8.2.1.1 Indicator 13.1.1: Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population

Despite the ongoing efforts focusing on educating residents and raising awareness that is aimed at preventing and reducing incidences of disaster and promoting safety, emergency incidents have predominantly increased since 2021. According to the available City data, an upward trend in the incidences of house fires has been observed since 2021. This has led to an increase in fire-related deaths in Tshwane. People residing in informal settlements are the most vulnerable to the disasters experienced in Tshwane. The noted increase in incidences can be attributed to various factors, such as urban densification and other human behaviours that trigger the occurrence of such incidences.

Currently, the City is conducting a study that assesses the efficacy of public awareness and education initiatives regarding disasters. The City also conducts disaster and fire safety risk assessments, particularly in high-risk areas, and actively engages in public awareness campaigns, prioritising vulnerable communities such as informal settlements. These interventions and efforts have always been viewed as proactive measures that empower communities, residents and individuals with the necessary disaster and fire safety knowledge that is aimed at deterring practices, conducts and behaviours that promote the manifestation of risks and exacerbate vulnerabilities.

8.2.1.2 Indicator 13.1.2.D: Number of national and local disaster risk reduction strategies adopted by South Africa

The City acknowledges that strengthening disaster risk governance and preparedness are critical enablers for the effective implementation of disaster-resilient measures and strategies. In the City, the implementation of risk-reduction measures is guided by the

Critical Infrastructure Contingency Plan (CICP), which assists critical service delivery departments to develop hazard-specific emergency operational plans for critical infrastructure or mission-critical areas. This plan identifies the hazards, outlines the risks and identifies the resources and coordination procedures for responding to and supporting emergency and disaster operations. It also includes measures of recovery to restore the affected critical infrastructure or mission-critical areas to an acceptable level of operational continuity and functionality. The City also develops and implements Flood Response Plans, which outline the measures for managing any local flooding situation from prevention to mitigation, response and recovery.

The City also leverages urban planning to embed disaster risk management. This is expressed by using the urban planning and development application process to integrate strategies that mitigate the impact of natural disasters and enhance overall resilience. Furthermore, disaster risk management comments are given to all urban planning interventions to ensure that urban development aligns with the goal of minimising risks and enhancing the safety and sustainability of communities in the face of potential disasters.

8.2.2 Target 13.2: Integrate climate change measures into national policies, strategies and planning

8.2.2.1 Indicator 13.2.1: Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change

The City has undergone a process of determining a suite of climate change guiding instruments in the form of policies, strategies and plans, which were developed in full consideration of the City's local context while also considering a national perspective relating to climate change. This effort is aimed at integrating climate change-sensitive programming and consideration in the business processes of the City while also intensifying adaptation communication which is properly targeted to serve various actors in the City.

In this regard, this entailed the development and implementation of a suite of guiding instruments which, among others, include the following:

- City of Tshwane Climate Action Plan approved for implementation in June 2022, which guides the City's efforts in mainstreaming climate action in the business of the City and its operations
- Green Building Development Policy of 2009 and Green Building Development By-Law enacted in 2021, which provide guidance and directives as well as standards on actions that reduce environmental impacts and enforce compliance with those directives and standards, respectively
- Sustainable Financing Strategy for Green Economy Transition, which intends to guide on the different sustainability financing mechanisms to be explored during project acquisition. It identifies financing approaches and instruments to support the City's green policies and projects, and as a supporting tool for mainstreaming environmental sustainability, contributes to the development and introduction of

practical and realistic external financing mechanisms for the City's green economy projects.

Through these initiatives, climate protection and climate change consideration has become an integral part of the efforts made when planning and implementing the business of the City.

8.2.2.2 Indicator 13.2.2: Total greenhouse gas emissions per year

Greenhouse gas emissions contribute significantly to global warming. Endeavouring to reduce greenhouse gas emissions is one of the most important critical focus areas of the City. The City's efforts to reduce greenhouse gas emissions include the following:

- Industry regulations wherein the City monitors and enforces practices that has a potential to reduce emissions
- Encouraging sectors to invest in low-carbon interventions
- Partnering with various stakeholders (academia, diplomatic corps and NPOs) to drive the green economy trajectory
- Investing in various mainstreaming programmes to encourage investing in sustainable infrastructure, awareness and education
- Developing policies and guidelines

In the City, the first Greenhouse Gas Emissions Inventory was developed in 2017 using the baseline information from the 2014/15 financial year. The second inventory was developed in 2023 using the baseline information from 2020/21. While the development of the inventory should be an annual undertaking in the City, the financial constraints experienced make this impossible. To mitigate this limitation, the City works out some estimates manually and based on this manual determination of emissions, the annual Greenhouse Gas Emissions was estimated to be around 702 000 000 tonnes of carbon dioxide equivalents (CO₂e). The City is still building technical expertise around the area to ensure that capacity is enhanced. This will enable building an internal base and ensuring that there is credible data for the VLR process and reporting in future.

Against this background, the total emissions recorded in Tshwane over the 2020/21 financial year equals 21 426 357 tonnes of CO₂e and the major emission-producing sectors are stationary energy, transport and waste. The stationary energy sector includes emissions (largely carbon dioxide) from energy used for non-transport purposes (electricity used in buildings, liquid petroleum gas used in industries, etc) as well as fugitive losses (leaks) from natural gas pipelines. The waste sector includes emissions (largely methane) from landfills and waste water. All emissions (carbon dioxide, methane and nitrous oxide) are represented as CO₂e. The emissions per capita within the boundaries of Tshwane are high when compared to the world average and relatively high when compared to other South African metros.

Comparing the Greenhouse Gas Emissions Inventory for the two inventory years (2015/16 and 2020/21), the City achieved a 3% reduction in emissions at the backdrop of 11% in population growth. Emissions per capita have declined by 13% and emissions per GDP declined by 38%. There was no significant difference in the

emissions from the stationary sector between the two inventory years, namely 11 971 055 CO₂e in 2015/16 and 11 987 487 CO₂e in 2020/21.

The transportation sector emissions have declined by 12%, and emissions from the waste sector declined by 1%. The manufacturing industries and construction subsector was the highest contributor of greenhouse gas emissions in the previous inventory (2015/16), of which emissions from this subsector increased by 3% in 2020/21. Emissions from the on-road transportation subsector, which was the second largest emissions contributor in the previous inventory (2015/16), declined by 12% in the 2020/21 inventory. The emissions from solid waste generated in Tshwane have declined by 3% and emissions from waste water treatment increased by 11%.

8.2.3 Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

8.2.3.1 Indicator 13.3.1: Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment

At local level, the City implements various education and awareness activities to inform, sensitise and share knowledge with residents on a broad range of climate change-related matters. Various topics covering climate change-related thematic issues aimed at capacitating the general public forms part of these climate change awareness-raising and education interventions.

In implementing these interventions, the City receives technical assistance from various organisations which the City partners with and these include, among others, C40. The education, awareness and capacity-building activities implemented are structured in such a way that they resonate with different targeted audiences. In the main, these education, awareness and capacity-building activities target residents, businesses, professionals and City officials.

As part of the climate change awareness-raising campaign, the City develops some material and other instruments like policies, strategies and plans that are developed to influence the mainstreaming and consideration of climate resilience actions in business operations and other critical undertakings in the City.

It is estimated that through a collective of the education and awareness activities implemented over time, the City has reached out to more than 450 businesses, around 22 800 residents and about 6 500 City officials.

Furthermore, the City made concerted efforts to develop instruments that assist in promoting the mainstreaming of education and awareness for sustainable development in City operations and building capacity on climate change mitigation, adaptation, impact reduction and early warning. Among others, these mainstreaming instruments include the City of Tshwane Climate Action Plan, the Green Building Development Policy and the Green Building Development By-Law, as well as the Sustainable Financing Strategy for Green Economy Transition.

8.2.4 Target 13.a: Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

8.2.4.1 Indicator 13.a.1: Amounts provided and mobilized in United States dollars per year in relation to the continued existing collective mobilization goal of the \$100 billion commitment through to 2025

Most of the climate change interventions undertaken were through partnerships initiated. The figures may not be properly quantified due to limited expertise in that regard, but an indication can be made to give a picture. The programmes are mainly about providing technical assistance or support (around 36%), capacity-building and training (around 38%), co-creating key programmes, providing human capital (around 24%) and project implementation (around 10%). This includes activities such as undertaking studies like prefeasibility studies, financial modelling, project packaging, project bankability and sometimes financing options. The City experiences difficulties in getting financial resources for project financing and facilitations, especially around project implementation and maintenance.

8.2.5 Target 13.b: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

8.2.5.1 Indicator 13.b.1: Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change

In the City, this indicator relates to the following indicator which forms part of the reporting indicators developed through a reporting reforms initiative driven by the National Treasury, which South African cities have an obligation to report on annually: C88.C90(ENV) – Date of the last climate change needs and response assessment tabled at Council. In this regard, the last time that the City tabled its Climate Change Response Implementation Plan at Council was in May 2022. There are several City Sustainability Division initiatives implemented to support Goal 13, especially the following:

8.2.5.2 Indicator 13.3.1: Education, awareness and mainstreaming and indicator 13.a.1: Resources mobilised through partnerships

- Climate Action Implementation Programme: The City is participating in the Climate Action Implementation Programme which will take place for a period of four years. The C40 advisor has been appointed and is embedded in the City Sustainability Division to implement the programme. Two focal points for each sector from the City have been assigned to work closely with the City advisor to support the project

implementation. The programme focuses on waste management, energy and climate mainstreaming. Several stakeholder engagements have been undertaken and a clear roadmap of the programme approach has been developed with the affected user departments and divisions. The programme is at an advanced stage.

- **Municipal Rooftop Solar Photovoltaic System:** This initiative is meant to reduce municipal building reliance on grid-tied electricity and reduce operational costs. The City invested R5 million in the photovoltaic rooftop installation at the Tshwane Leadership and Management Academy to demonstrate that solar energy can reduce the operating expenses of our buildings as well as provide security of supply for key operational functions. Additionally, this serves to highlight the City's commitment to transitioning to low-carbon operations in City-owned buildings. The installed capacity output of the system is 204 kWh. There are three other installed systems donated by GIZ in three of the City's electricity depots that are used as part of the training of City electricity engineers. The capacity of the three installations is 3,5 kW each.
- **Demonstration of Green Building Concept:** The City's headquarters, Tshwane House, is designed, constructed and operated in line with the Tshwane Green Buildings By-law and is five-star green rated. Tshwane House is an example of a building resource mobilised through partnerships. The building symbolises the rebirth of the Pretoria CBD through innovation, excellence and social cohesion.
- **Tshwane NPO Empowerment Programme on Climate Change and Environmental Management:** The City initiated a collaborative partnership with community-based organisations on climate change and environmental management activities. The programme was piloted during 2020/21 and is known as the Tshwane NPO Partnership on Climate Change and Environmental Management. The initiative aimed to ensure that existing identified community-based organisations were capacitated and empowered to drive a climate change agenda from community level using local adaptative measures, and they were supported to access available resources through various platforms.

In the same vein, in celebration of Mandela Day 2021, the Office of the Executive Mayor donated some funds to the Tshwane Leadership Foundation to develop a Garden of Peace, a food garden established adjacent to a shelter for abused women and their children. There was another initiative in Salvokop to establish a cycling club as part of our contribution to October Transport Month 2021. Here over 100 bikes were donated to the youth in this community to support the uptake of cycling. An MoU was signed in February 2022 with an NPO known as Hennops Revival to support its efforts to rehabilitate the Hennops River, largely through the coordination of volunteer-driven clean-ups. This MoU complements the work of the Centurion Lake/Hennops River Task Team, over which the City Sustainability Division plays an oversight role.

- **Green Infrastructure and Water Project:** A research project was undertaken with the World Wide Fund-South Africa (WWF-SA) and Rainbow Junction to develop a cost-benefit analysis of the inclusion of green infrastructure to address the climate hazards of both heating and flooding. The outcome of the research proved that in the long run the benefits of investing in green infrastructure outweigh the costs

through reduced risk of flooding and reduced energy costs. The results were shared through an online seminar involving City officials, other cities and the private sector.

- **Building Efficiency Accelerator Programme:** This is another programme where the City has committed to ensure building efficiency for City-owned buildings by embarking on retrofits and introducing renewable energy sources for own use.
- **C40 New Building Energy Efficiency Programme:** The programme is about accelerating and implementing transformational energy policies and programmes for new buildings, working towards net zero carbon performance. For the City, it means going beyond national requirements and business as usual by implementing ambitious carbon-reduction targets for all new buildings. The lessons learnt from the programme will be widely shared across both C40 and non-C40 cities. As the only city in South Africa that has a green building by-law, it is about setting new trends as an innovator city and taking forward sustainability leadership in making all new buildings truly green, thereby combating the effects of climate change.
- **Research on SANS10400 XA Baseline Study:** In 2018, the City completed a baseline study on compliance with SANS 10400 XA, a national building regulation which ensures building efficiency in building developments. The results were fed into a process of reviewing the green building by-law for low-carbon developments in Tshwane. The City has previously organised training sessions and workshops on SANS 10400 XA, specifically for the Built Environment and Enforcement Division.
- **Review of Tshwane Policy for Green Buildings:** The City council approved the Green Building By-law in 2012. The by-law specifically promotes energy efficiency and renewable energy in the design of new buildings. To ensure that the by-law aligns with and enhances the existing national building regulation standards, the City has reviewed the by-law to ensure that it aligns with SANS 204 and SANS 10400 XA.
- **Tshwane Climate Change Research Symposium:** The City and the Tshwane University of Technology combined forces to co-host a two-day Climate Change Research Conference. The conference aimed at profiling research conducted by both academic and research institutions in the field of climate change and ascertaining the planning and scoping of possible areas of further collaboration based on the Municipal Research Agenda and City of Tshwane Climate Action Plan. The conference convened representatives of the local and international academic and research community to present their research that has implications for how the City could mitigate and adapt to climate change and to stimulate new areas of research to enhance the implementation of the City of Tshwane Climate Action Plan.
- **Climate Budget Initiative:** The City is one of the cities participating in the Climate Budget pilot. There are two city officials (from the City Sustainability Division and the Budget Office Division) representing the City for capacity-building to implement the pilot. Several webinars were attended whereby the 11 participating global cities shared valuable ideas on ways to introduce the climate budget implementation.

The City has developed a concept document which outlines the possible implementation approach.

- Resource Mobilisation Programme: The approach to collaborative partnerships is based on the principle of diversity where some partnerships are mainly focused on technical assistance, while others are geared towards advisory, coaching and mentorship as well as project financing facilitation and project investment readiness assessment.
- Active Citizenry and Youth Programme: The City Sustainability Division has played an important role in working with the Stakeholder Division to coordinate the Tswelopele Campaign, which is a campaign to support and promote a partnership-based model to keeping communities clean.

Noticeable trends that support addressing climate change in Tshwane:

- Sustained political commitment
- Increasing interest among City officials, like the approval of the City of Tshwane Climate Action Plan
- Improved community-based adaptive measures
- More NPOs participating in the climate change space
- Significant climate change co-benefits
- Improved understanding of climate risk awareness and community empowerment
- Informed land use decisions and effective disaster response
- Enhanced collaboration around climate change action

8.3 Multiplier effect of Goal 13 to other goals

Given the transversal nature of interventions organised to address climate change, these interventions have a significant impact on many of the SDGs. As the impact of climate change affects a wide range of sustainable development objectives, the effectiveness of the efforts aimed at combating climate change will serve as a catalyst for the attainment of other goals. In promoting climate action through advancing the implementation of interventions that, among other things, seek to reduce greenhouse gas emissions and disaster risks (floods, fire, air pollution, etc), the City is also impacting on the progress towards achieving other goals. The work undertaken in pursuit of Goal 13 has an effect on other goals and has linkages to the work undertaken to deliver on the aspirations of other goals. These effects and linkages between Goal 13 and other goals are explored below.

As the City pursues interventions that seek to promote climate resilience and mitigate disaster risks, such actions proactively and reactively prevent damages to infrastructure as aspired to in Goal 9. The prevention of floods and fires (key actions of Goal 13) that are a threat to infrastructure and that impact negatively on making cities and settlements liveable has beneficial effects on Goal 11. Also, protecting the infrastructure that provides access to water, sanitation and electricity plays a critical role in promoting sustainable cities and communities, as this action ensures that communities have access to these life-sustaining services.

As the City continues streamlining and implementing a strong climate-resilient programme in the mainstream business of the City, this has a more pronounced

influence and effect on Goals 3, 6, 7, 9 and 11. More specifically, efforts like the institutionalisation of climate-resilient planning and budgeting in the City seek to ensure that consideration of climate change becomes central in the planning, budgeting and implementation processes undertaken by the City. This again contributes to all the goals as this has strong connotations to sustainable development that spans all areas of human lives impacted by all the goals.

The ability to adapt to climate change and promote resilience encompasses the impacts on health (Goal 3) and on provision of water services (Goal 6). Goals 7, 9 and 12 also have important roles in fostering more sustainable strategies to contribute to reduced greenhouse gas emissions. The impacts of climate change on aquatic and terrestrial ecosystems are numerous, including desertification, ocean acidification and the consequences to biodiversity. Greater consideration of climate change in the plans of the City is expected to be more beneficial to the achievement of the aspirations of Goals 1, 2, 3 and 5.

8.4 Challenges

The table below presents key challenges encountered in implementing interventions that serve Goal 13 and the proposed solutions.

Table 9: Overview of key challenges encountered in implementing Goal 13

Set of challenges being encountered	Proposed solutions to ameliorate the challenges
Data limitations and information gaps	There is a need to crystallise and centralise data sources for the City and invest in data collection and analysis systems that provide accurate and up-to-date information on climate risks. Collaborations with research institutions, non-governmental organisations and the private sector are necessary to enhance the availability and accessibility of relevant data.
Human technical skills limitations	Human resources support or deployment: The City Sustainability Division and City Disaster Unit are currently not fully capacitated and are still minimally staffed. Only 70% of positions are filled while the remaining 30% are unfunded and vacant. The offices need to be capacitated to manage and update the Greenhouse Gas Emissions Inventory and the Climate Risk and Vulnerability Assessment, as well as to undertake detailed climate action planning and overall sustainability reporting.
Capacity-building for climate action focal points and C40 network leaders	<ul style="list-style-type: none"> • Continuous technical assistance in the form of capacity-building and empowerment on specific topics for City officials • Continue building the capacity of municipal staff through training programmes, partnerships with academic institutions and collaborations with experienced organisations • Establish a knowledge-sharing network among municipalities to facilitate the exchange of best practices and lessons learnt
Inadequate infrastructure	<ul style="list-style-type: none"> • Develop and implement infrastructure plans that prioritise climate-resilient and sustainable projects • Embrace nature-based solutions, such as green infrastructure and sustainable urban planning
Lack of information on climate impacts and measures	Develop a climate assessment tool which will measure and quantify the reduction impacts of the specific mitigation-focused climate actions.
Insufficient early warning systems	Invest in and improve early warning systems that can detect and communicate climate-related risks, which include enhancing infrastructure for monitoring

Set of challenges being encountered	Proposed solutions to ameliorate the challenges
	weather patterns, implementing robust communication systems and ensuring that communities are well informed about evacuation procedures and early warning signals.
Urbanisation and infrastructure vulnerability	<ul style="list-style-type: none"> • Implement climate-resilient urban planning and infrastructure development, which includes zoning regulations, land use planning and construction standards that prioritise resilience • Invest in infrastructure that can withstand extreme weather events and minimise the impact on communities
Lack of cross-sectoral cooperation	Strengthen the support of the departmental climate change focal points
Lack of budget or financial support	<p>There is a need to make significant budget provision for climate change programmes by exploring innovative financing mechanisms, such as public-private partnerships, green bonds or seeking international climate finance.</p> <p>The City should prioritise climate action within its budget and seek support from national governments or international organisations.</p>

Source: City of Tshwane archives

8.5 Key recommendations

First is the alignment of the climate change institutional reporting process to have the indicators customised to local dynamics. Secondly, the City must consider developing a tool or methodology to measure and quantify the carbon-reduction efforts and to set annual targets. This is a step-up change from the Global Protocol for Community Tool. Thirdly, the City Sustainability Division is developing an intentional and well-outlined climate change action implementation plan. Lastly, the City also plans to establish a functional SDG Advisory Committee.

On emergency response planning, there is a need for the City to review and regularly update emergency response plans that address the specific risks faced by the City and its departments. The City is also about to conduct regular drills and simulations to ensure effective implementation of response plans.

A structured capacity-building and training programme whereby the City will provide training and capacity-building programmes for local government officials and staff on disaster risk reduction principles and practices will also be undertaken. Furthermore, the City is about to support the development of local expertise in risk reduction and disaster management.

On monitoring, accountability, evaluation, learning and a reporting system, the City needs to establish a system for monitoring and evaluating the implementation of local climate change and disaster risk reduction strategies. Furthermore, it needs to regularly review progress and adjust strategies based on lessons learnt and changing risk profiles. On investing in data-capturing and data-sharing systems that will allow for integrated data-sharing between City departments and other relevant role players, the City needs to keep on developing a comprehensive risk assessment tool to be used by all relevant departments to identify vulnerable areas and populations. Further, the City needs to use the assessment findings to develop targeted strategies for high-risk zones and implement an early warning system to alert communities and minimise loss of life.



Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

9.1 Goal description

Goal 17 is about the main means of implementing SDGs through the revitalising of global partnerships for sustainable development. Partnership can be between governments, the private sector and civil society. The SDGs can only be realised with a strong commitment by all to a global partnership and cooperation to ensure that no one is left behind in the journey to sustainable development. Therefore, partnerships present a practical solution to some of the problems affecting development today.

9.2 Contextualising partnerships of the City of Tshwane

South Africa is currently facing service delivery challenges related to the provision of basic services, including water, sanitation, waste management and electricity. As per the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000), the provision of basic services is the competence of municipalities as they are directly responsible for improving and maintaining quality of life and healthy living conditions for communities.

The effective and reliable delivery of services is one of the biggest challenges that the country faces across all municipalities. Added to this are the financial challenges that municipalities generally, and the City specifically, face, which lead to the inability to effectively deliver basic services and maintain infrastructure. The City resorted to establishing partnerships with strategic organisations and funding institutions to augment its limited financial resources and, in some cases, capacity. The City has identified several strategic partners and resolved to enter into long-term partnerships to mitigate some of the service delivery and infrastructure-related challenges it faces.

Given the City's needs for infrastructure development, maintenance, expansion and upgrades, it is important for the City to have broader collaborations in the form of memorandums of understanding and agreement with identified strategic partners. Acknowledging that impactful growth and development as well as effectiveness in delivering sustainable quality services in the Tshwane region can be achieved through establishing good relations and partnerships with various partners and stakeholders, the City established beneficial relations and partnerships with domestic and international partners and stakeholders. These partnerships are discussed in the sections below.

9.3 Legislative framework and guiding instruments

In South Africa, the government is constituted by the national, provincial and local spheres of government, which are distinctive, interdependent and interrelated. This is a provision of Section 40 of the Constitution of the Republic of South Africa, 1996. Section 41(1)(g) provides for all the spheres of government and all the organs of the state within each sphere exercising their powers and performing their functions in a manner that does not encroach on the geographical, functional or institutional integrity of a government in another sphere.

Based on the intergovernmental relations principle of cooperative governance as envisaged in Section 41 of the Constitution, the three spheres of government are distinctive, but they have a duty to cooperate in mutual trust and good faith with one another and to have respect for one another's institutional integrity. Section 151(4) of the Constitution specifically directs the national and provincial government to guard against compromising or impeding the ability of a municipality to exercise its powers or perform its functions.

An intervention in the affairs of the local government must first and foremost not flout the principle of cooperative government. The guiding principle must always be the well-being of the residents of the municipality.

It is in line with these constitutional requirements that the Intergovernmental Relations Framework Act, 2005 (Act 13 of 2005) was promulgated to regulate relationships between the three spheres of government. This act mainly provides structures for interaction, instruments for cooperation and measures to ensure cooperation and dispute resolution.

Notwithstanding the above, the City, in its intergovernmental work, is further governed and guided by other legislative and policy imperatives that include Chapters 3 and 7 of the Constitution, Local Government: Municipal Systems Act, 2000 (Act 32 of 2000), Local Government: Municipal Finance Management Act, 2003 (Act 56 of 2003), Organised Local Government Act, 1997 (Act 52 of 1997) and Integrated Development Plan of the City, 2016–2021, among others.

In addition to the above pieces of legislation, Chapter 13 of the National Development Plan which focuses on building a capable state sets out a proactive approach to improving intergovernmental relations in South Africa.

9.4 Progress towards realising the goal

9.4.1 Target 17.3: Mobilize additional financial resources for developing countries from multiple sources

9.4.1.1 Partnership with the Development Bank of Southern Africa

The Development Bank of Southern Africa (DBSA) is one of the leading African development finance institutions wholly owned by the government of South Africa. The DBSA was established in 1983 to perform a broad economic development function within the homeland constitutional dispensation that prevailed at the time. In 1994, the new dispensation resulted in the transformation of the role and function of the DBSA. In 1997, the DBSA was reconstituted in terms of the Development Bank of Southern Africa Act, 1997 (Act 13 of 1997) as a development finance institution.

The City has an ongoing relationship with the DBSA which includes funding support and the smart city initiative. The DBSA approached the City to participate in the World Bank-supported Smart City Programme and to give effect to this, the City signed a Memorandum of Agreement (MoA) with the DBSA in 2022 to support the City's efforts towards Tshwane becoming a smart city. This agreement provides for project preparation and technical support for drafting, reviewing and finalising smart city

strategies for the City and reviewing the consolidated infrastructure plan to ensure alignment with the smart city strategy.

The local government sector is an investment area where the DBSA holds extensive expertise. The DBSA's approach for each sector requires a customised response with the challenging economic environment as well as the capability of municipalities to deliver on their intended infrastructure projects. The DBSA supports municipalities with proper municipal infrastructure plans, such as master plans in water, sanitation, electricity, roads and storm water, and infrastructure investment plans. An amount of R54,5 million has been allocated by the DBSA to the Rooiwal Waste Water Treatment Plant for this financial year.

9.4.1.2 Partnership with the Department of Science and Innovation

The Department of Science and Innovation derives its mandate from the 1996 White Paper on Science and Technology, which introduced the concept of the National System of Innovation, a set of interacting organisations and policies through which South Africa creates, acquires, diffuses and puts into practice new knowledge to help achieve individual and collective goals. A coordinated and efficient National System of Innovation will help the country achieve its national development priorities by promoting change through innovation. This will enable all South Africans to enjoy the economic, socio-political and intellectual benefits of science, technology and innovation. The department seeks to boost socio-economic development in the country through research and innovation by creating an enabling environment and resources for science, technology and innovation.

The City and the Department of Science and Innovation have entered into a collaboration with defined areas of cooperation, and signed an MoA to formalise the ongoing cooperation and to create a platform for cooperation in other areas of mutual interest. The Department of Science and Innovation has been cooperating with the City under the Viability and Validation of Innovations for Service Delivery Programme, which was conceptualised by the Department of Science and Innovation and the South African Local Government Association and is aimed at assessing the viability of using innovation to address service delivery challenges, and is funded by the European Union and the National Treasury through the Sector Budget Support. Through this partnership, R15 195 249,14 was allocated to the City for projects related to water and sanitation, innovation capacity-building and innovation measurement in municipalities, integration of innovation in the municipal environment and the e-participation in policy-making and policy-modelling platform for South Africa.

In addition, the City was approached by the Department of Science and Innovation to be one of the founding members of the Science Diplomacy Capital for Africa (SCRA) alongside the Department of Science and Innovation and the CSIR, an initiative whose main objectives are to showcase Tshwane as the host of the most innovative square kilometre in Africa, meaning it is home to the most research councils, innovation organisations and universities and the science and innovation policy lead (Department of Science and Innovation) in South Africa. The aim is to take advantage of Tshwane hosting the second most foreign missions in the world and advocate for their home countries' collaboration and investment in science, technology and innovation for socio-economic development first and foremost in Tshwane and South Africa at large,

which should translate into knowledge economy growth and investment in high technology companies in Tshwane to positively impact the lives of Tshwane residents.

9.4.1.3 Partnership with the Department of Water and Sanitation

Water is a critical resource necessary for sustainable socio-economic development and growth. South Africa is a water-stressed country, characterised by low rainfall, limited underground aquifers and increasing dependence on water resources outside its borders. Addressing water issues requires a collaborative effort between the City and key water stakeholders. The Department of Water and Sanitation is a department of the government of South Africa whose legislative mandate is to ensure that the country's water resources are protected, used, developed, conserved, managed and controlled by regulating and supporting the delivery of an effective water supply and sanitation as per the National Water Act, 1998 (Act 36 of 1998), as amended, and the Water Services Act, 1997 (Act 108 of 1997).

The Department of Water and Sanitation is the custodian of South Africa's water resources. It is primarily responsible for the formulation and implementation of policy governing this sector. While striving to ensure that all South Africans gain access to clean water and dignified sanitation, the department also promotes effective and efficient water resources management to ensure sustainable economic and social development.

The City has been facing significant water challenges, which have been affecting several residents. Some of these challenges can be linked to aging infrastructure and inadequate budgets to maintain infrastructure, such as water and waste water treatment works, among others. A lack of water supply represents a significant constraint to the spatial transformation of Tshwane as industrial developments and residential densification in the north and east are hampered by the lack of availability of water and sanitation alongside other critical services.

The City has embarked on a programme to formalise strategic partnerships that will contribute to addressing water and sanitation-related challenges. The Department of Water and Sanitation is one of these strategic partners which the City has approached not only to engage the City as a regulator but to collaborate on issues such as leveraging Department of Water and Sanitation technical and financial resources to enhance the City's human resources capacity as well as joint efforts to address other challenges, such as the Hennops River pollution and Rooiwal Waste Water Treatment Works upgrades.

9.4.1.4 Partnership with the Gauteng Department of Sport, Arts, Culture and Recreation

The Gauteng Department of Sport, Arts, Culture and Recreation is mandated by Schedule 5(a) of the Constitution of the Republic of South Africa, 1996 to provide arts, culture and library services. Municipalities have been providing these services on behalf of the Gauteng Province and it is critical that the two spheres of government work together and align their efforts in executing these mandates. Furthermore, the Gauteng Province also delivers sport and recreation services directly in municipalities and relies on good working relations with the City for the successful implementation of its programmes and activities.

In accordance with the Division of Revenue Act, the Gauteng Provincial Government annually allocates grant funding to the City for library services and implements sport, recreation, arts, culture and library programmes and events within Tshwane communities.

9.4.1.5 Partnership with the City of Aarhus, Denmark

The City signed an MoA with the City of Aarhus in September 2017 to promote collaboration on smart and sustainable cities initiatives. Phase 1 of the collaboration focused on exploring impactful projects on water (waste water, non-revenue water and storm water management). This phase delivered on the following outputs:

- Development of the non-motorised transport guideline (framework)
- Completed the Salvokop enumeration study to inform the conceptualisation of an inclusive human settlement plan
- Development of the guideline (framework) for affordable rental units in Tshwane
- Development of the storm water management plan
- Capacitation of City employees on the management of non-revenue water
- Completed the design and implementation of a hydropower generation plant with a focus on Salvokop Reservoir
- Development of the guidelines for open space management

The relationship has entered a second phase that continues the collaboration with the City of Aarhus with a dedicated focus on water management. In addition, the Danish government donated R33 million to the City to help it improve water security and learn how to manage water for Tshwane residents. The donation from the Danish government will lend a hand towards the City's efforts to deliver quality and efficient public services.

9.4.1.6 Partnership with the Tshwane University of Technology: Tshwane Varsity Hackathon

This is a student-focused initiative and an annual hacking competition executed in partnership with the Tshwane University of Technology through a service-level agreement signed by both parties, drawing on the expertise of young innovators and entrepreneurs to provide solutions to the City's service delivery challenges. The Tshwane Varsity Hackathon enhances the efficiency and effectiveness of the City in delivering services and in creating a more inclusive economy. In-kind contributions to the value of R500 000 were contributed towards this initiative.

9.4.1.7 Partnership with Hollard

The Tshwane Leadership and Management Academy, the Emergency Services Department and the City Sustainability Division in the Office of the Executive Mayor identified a project called Risk Reduction Initiatives. Currently, the project has recruited and placed an additional 29 City and Hollard Fire Prevention Inspectors who will be allocated to each region to undergo training for 12 months, including theory and practical tests, at the Erasmuskloof Fire Station.

Hollard has agreed to incur the financial implications for the training, personal protective equipment and stipends to the value of R2,6 million. This project

commenced in September 2023 and the current MoU, which expired in June 2023, has been renewed until September 2028. In addition, Hollard committed an additional R200 000 to the Adopt-a-Traffic Light Initiative to address the impact of load-shedding on road safety and to aid motorists and pedestrians with the risks posed by load-shedding. It has been noted that most of the frustrations on the road is caused by delays when traffic lights are not working, especially during peak hours.

This project will be done in partnership with the Roads and Transport Department (identifying intersections with high traffic volumes) and the Energy and Electricity Department (connecting alternative energy sources). There are several other companies who have also shown interest in this project, such as Property Through Positive Change (PTPC) and Helandie Calaça Attorneys. The Office of the Executive Mayor has also shown interest to include the public lighting and street light repairs initiative for the 2023/24 reporting year.

9.4.1.8 Partnership with Santam

In partnership with Santam, a team of 15 learners recruited by the Tshwane Leadership and Management Academy will be employed for a period of six months to clear storm water drains in the following high-risk areas:

- Region 3: Pretoria CBD and Atteridgeville
- Region 4: Olievenhoutbosch and Itereleng
- Region 6: Mamelodi, Eersterust and Pretoria East

This project was set to commence in September 2023. Santam has set aside R700 000 towards stipends, transport and other related services and working materials for this project. In addition, Santam has further committed R1 million to the street light repair project.

9.4.1.9 Partnership with South African Breweries (Pty) Ltd

The South African Breweries (Pty) Ltd donated R6 551 439,33 towards repairing Rosslyn 132/11 kV Substation that was damaged by fire on 26 August 2021, which has negatively affected the production of several companies. The duration of the project was estimated to be 20 to 26 weeks with the commission planned that started in June 2023. The Energy and Electricity Department provided oversight during this project. The substation has been fixed and is waiting for the cogel (combination of solar and gas) since Rosslyn wanted to increase the capacity from 75% that was approved by the City to 90%. The South African Breweries also participated in and presented at the Speaker's Women's Dialogue held on 14 September 2023 at Tshwane House, which also included a donation of R28 750 for catering.

9.4.1.10 Partnership with Nestlé

Winterveld Library received a donation of R200 000 from Nestlé to install a backup generator which will assist students during load-shedding. The project was finalised in August 2023. The backup generator is fully functional, and students have received an opportunity to use the library during load-shedding. The City is currently finalising a five-year MoU with Nestlé to collaborate on community and social development initiatives, tourism and libraries, environment and agriculture, as well as innovation

and economic development. The Mayoral Committee resolution was approved on 23 September 2023 and the MoU was signed by the City Manager.

9.4.1.11 Partnership with Coca-Cola Beverages South Africa

In support of the City's human settlements formalisation project, Coca-Cola Beverages South Africa donated R1 million for the drilling of a borehole on a farm in Zandfontein 317-JR. This project seeks to address the water needs in the Gommora/Malusi Informal Settlement. Coca-Cola Beverages South Africa invested R400 million to expand its Phelindaba Plant in Pretoria West that will create 1 000 permanent jobs. This investment will enhance job creation and boost Tshwane's economy.

9.4.1.12 Partnership with the Gauteng Sports Confederation

The Gauteng Sports Confederation donated R2 million towards the upgrading of Ekangala sport courts. Unfortunately, the water quality and continuous disruptions by the community hindered the progress on the project and the project is on hold. The City is currently pursuing the Gauteng Sports Confederation in collaboration with the City's Sports, Recreation and Infrastructure Development Division to look for an alternative area within Tshwane to avoid losing this sponsorship.

9.4.1.13 Partnership with the South African National AIDS Council

An amount of R3 million was donated to the City by the Global Fund to Fight AIDS, Tuberculosis and Malaria for training law enforcement agencies. This partnership was launched in June 2023 and, to date, five training sessions have been facilitated by the South African National AIDS Council on HIV/AIDS, TB and malaria with the Tshwane Metro Police Department.

9.4.1.14 Partnership with BMW South Africa

The City facilitated the approval of a three-party agreement between the City, BMW South Africa and Bronkhorstspruit Biogas Plant (Pty) Ltd for an increase in renewable energy for the BMW Plant in Rosslyn. The biogas plant has been completed and is fully operational. This project led to the sharing of expertise and best practices since the country is facing an energy crisis. BMW South Africa has further invested R4 billion in the Rosslyn plant to produce electro mobility cars (BMW X3) which will be exported to different countries. This will enhance job creation and boost Tshwane's economy.

9.4.1.15 Partnership with the Silver Lakes Golf & Wildlife Estate

The Silver Lakes Golf & Wildlife Estate has donated an amount of R435 000 to support the City's projects, such as pothole, water leak and street lights repairs, in the estate during the strike. This project will be implemented in partnership with the City's Regional Operations and Coordination Department, Region 6.

9.4.1.16 Partnership with Nedbank

An MoU between Nedbank and the City was signed in 2020. Through this partnership, Nedbank donated a sum of R1,8 million to the City. Some of the projects implemented under this partnership include the following:



- Strong Schools Programme which has a focus on infrastructure development and maintenance, curriculum support, school safety, food security, mentorship, sport and recreation, teacher development, involvement of parents in school affairs and sourcing of donors and funding.
- Proud of My Town Initiative focusing on creating spaces that promote health, happiness and well-being, projects that improve the aesthetics of an area, build community pride, cohesion, ownership and reduce crime, painting and cleaning to create opportunities for investment contributions from local businesses (clean, safe spaces change investor sentiment) and implementing place-making methodology to give communities a sense of place, celebrate local culture and create recognisable beacons.

The beneficiaries of the undermentioned projects include unemployed youths, aspiring entrepreneurs, aspiring farmers and school children.

9.4.2 Target 17.16 Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries

9.4.2.1 Partnership with the Matsapha Town Council, Eswatini

Eswatini’s Matsapha Town Council approached the City to explore the establishment of a partnership that would promote exchange of information, knowledge and expertise from both sides. Subsequently, the City hosted Matsapha officials on a scoping mission led by their former Town Mayor, Cllr Alice Russo, from 4 to 8 April 2022. The objectives of the scoping mission were to benchmark and share knowledge on municipal fiscal management, budgeting and planning, revenue generation, policy development, environment and waste management, integrated development planning, and smart and sustainable development.

9.4.2.2 Partnership with the Tshwane University of Technology: Women in Innovation and Leadership Dialogue

The Women in Innovation and Leadership Dialogue (WILD) is an annual innovation initiative executed in partnership with the Tshwane University of Technology through a service-level agreement that was signed by both parties, focusing on empowering women innovators for leadership roles and promoting active participation in the innovation ecosystem. This initiative aims to expand and improve on an all-encompassing women leadership innovation network that will be beneficial for all stakeholders, launching new and various strategic platforms for women innovators and entrepreneurs to collaborate, co-create, demonstrate and commercialise their innovations for social benefits and building accessible platforms for women-focused innovation programmes, with the view of identifying innovation solutions relevant to the City’s service delivery needs.

Topics such as the impact of women in society, cultivation and nurturing of appropriate ecosystems and value chains in support of women contributing towards innovation

chasms formed part of the discussions. Equity designed to uplift women forging innovation with ideas to action through programmes was also highlighted.

Through this partnership, the strategy in women's innovation is to build market awareness, investment and industry-wide actions to grow an innovation market that advances gender equality and empowers women and young girls. Also, developing tools and methodologies with industry partners to take a gender-responsive approach to innovation, promoting women as innovators and entrepreneurs, and investing in innovations and technologies that meet the needs of women were also discussed.

9.4.3 Target 17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

9.4.3.1 Partnership with Oppie Bol Foundation

The City signed an MoA with the Oppie Bol Foundation for a period of five years. The Oppie Bol Foundation is an NPO focusing on disability with a track record of championing the rights of people living with disabilities by implementing various programmes. Complementary to the MoA, the Oppie Bol Foundation has conceptualised an Inaugural National Disability Events Calendar covering the period from March 2024 to August 2025 as part of the implementation of this agreement.

9.4.3.2 Partnership with PinkDrive

The City is currently in the process of finalising a five-year MoU with PinkDrive. PinkDrive is a health sector non-governmental organisation that was founded in 2009 on the premise that early detection will help to prolong a life. PinkDrive's cardinal purpose is to contribute meaningfully towards preventing the vulnerable residents of Tshwane from succumbing to breast, cervical, prostate and testicular cancer. The organisation will assist the City with clinical breast examinations as well as mammograms at 12 City clinics.

9.4.3.3 Partnership with Voortrekker Monument

The City is currently pursuing a partnership with the Voortrekker Monument. The draft MoU has circulated for comments and further consultation of other government departments to assist or provide clarity on issues of the public-private partnership approach cited by the City's Group Legal and Secretariat Services when entering into such agreements. This partnership focuses more on sharing best practices on environmental issues with the City.

9.4.3.4 Partnership with AfriForum

AfriForum is a civil society organisation that has offered to partner with the City on its service delivery initiatives. This includes initiatives pertaining to the environment, safety and security, as well as waste management.

9.4.4 Target 17.18: By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts

9.4.4.1 Partnership with the National School of Government

The City and the National School of Government (NSG) agreed to explore a collaboration based on the need to continuously develop employees to serve the City effectively and efficiently. The NSG is a state training institution tasked with building public sector capacity to implement the South African government's developmental agenda. The establishment of the NSG is premised on the fact that a capable public service is a necessary condition for various sectors of society to flourish, therefore, realising sustainable development outcomes. The focus of the NSG is to build the capacity of the state across all three spheres of government.

Through this partnership, the NSG provides support and guidance on matters relating to capacitating the workforce of the City in accordance with the City's training policy and workplace skills plan. The NSG conducts and facilitates training courses for the City as per the City's specific needs and subject to the rules, regulations, policies, practices and procedures of the NSG. In addition to this, the City identified the NSG as a potential strategic partner to collaborate with on innovation, knowledge management and research, among others.

9.4.4.2 Partnership with the Danish International Development Agency

The Danida Fellowship Centre, which administers development research grants provided by Denmark's Development Co-operation (DDC) on behalf of the Danish government, offered scholarships to City employees focusing on circular economy, entrepreneurship, innovation and value chains to capacitate City employees.

9.4.4.3 Partnership with the University of Pretoria: Community Oriented Substance Use Programme

COSUP is a drug and substance abuse response programme in partnership with the University of Pretoria. It is informed by credible scientific evidence aimed at intervening in the drug and substance abuse challenges facing the City. It is the first publicly funded, community-based programmatic response to the use of unregulated drugs in South Africa. The programme seeks to provide a continuum of evidence-based, substance use services that are integrated into the delivery of community-oriented primary care. The core service package includes physical, mental and substance use screenings, assessments, brief interventions and referrals, harm-reduction counselling, opioid substitution therapy, needle and syringe services as well as social services and skills development.

9.4.4.4 Multistakeholder agreement: The Tshwane Intersivity Innovation Challenge

The City embarked on a multistakeholder collaboration programme, the Tshwane Intersivity Innovation Challenge, with the goal of developing highly competent and confident student entrepreneurs who have the capacity to conceive and implement innovative solutions that can solve service delivery challenges. The programme aims to improve the quality of life of Tshwane residents and intends to build a vibrant and competitive entrepreneurship community that will create much-needed jobs. The stakeholders involved include the City, University of South Africa, Tshwane University of Technology, University of Pretoria, The Innovation Hub Management Company, Universities South Africa, Tuksnovation and Technology Innovation Agency.

The first instalment of the programme yielded results of over 150 ideas that were submitted on an open exchange platform tackling service delivery challenges around waste management, revenue collection, transport and electricity. A total of 24 new companies formed out of this initiative, 44 students were trained on entrepreneurship and 44 students were exposed to the Blue Oceans Strategy, facilitated by the International Blue Oceans Awards founders.

9.4.4.5 Partnership with the Department of Water and Sanitation – Infrastructure Branch Training Centre

The training of the City's Water and Sanitation Department employees at the national Department of Water and Sanitation (Infrastructure Branch Training Centre) by senior officials from the City and the City of Johannesburg through a formally accredited occupational qualification will lead to the development of competencies of individuals and lift their morale. It is envisaged that learners will be encouraged, motivated and inspired to further their studies.

In addition, senior City personnel will be able to effectively gauge the competencies of their juniors in terms of knowledge and practical and workplace skills. This will enable the City to create a pipeline of cohorts using its own internal staff to transfer knowledge and skills in a structured way. City assessors and mentors will also be incentivised through various mechanisms that are being explored, such as free executive training programmes to motivate and encourage them to participate in the programme.

The agreement also presents an opportunity for staff members working in water and sanitation services in the City to be trained in other occupational qualifications for which the Infrastructure Branch Training Centre is seeking accreditation. The City will also obtain workplace accreditation for occupational qualifications and be in a position to implement the new qualifications to replace the unit-based qualifications.

9.5 Multiplier effect of the goal

The collaborative partnerships entered into by the City with the partners as outlined in the sections above cover a wide scope that support all 17 SDGs. In the main, in all the business focus areas that cover the mandate of the City, the partnerships provide support and augment the capacity gaps and financial resources constraints, as well as bring the efficiencies necessary to realise the Agenda 2030.

The main areas supported and covered by the partnerships include city infrastructure development and upgrading or maintenance (Goal 9), delivering on constitutionally mandated basic services (water, sanitation and waste management), healthcare services (Goals 3, 6, 7 and 11) and environmental rights, innovative service delivery solutions, smart city initiatives as well as service area-specific research and development, including capacity development for municipal officials (staff, advocacy and championing of specific rights and customer-facing services) (Goal 15).

Over the duration of the partnerships, the City has realised significant benefits that have unlocked efficiencies in many service areas that cover almost all the goals, especially Goals 3, 6, 7, 11 and 13, with some benefits accrued from these goals influencing some of the goals that are not covered in this report.

9.6 Key challenges

Misalignment between the City and strategic partners' planning, budgeting and reporting cycles and processes is one of the key challenges, as is capacity and skills for packaging bankable City projects and a lack of proposal writing skills.

9.7 Key recommendations

Strengthening the internal City capacity for building and coordinating strategic relationships effectively and forging interlinkages in the planning, budgeting and reporting processes with other spheres of government to promote resource targeting are the key recommendations for improving partnerships for the SDGs.



Summary and key recommendations for advancing the localisation of the Sustainability Development Goals in the City of Tshwane

This section provides a summary of the report and in a way also provides key recommendations to be taken forward. Its structure is based on Goals 2, 3, 6, 7, 11, 13 and 17 in that sequence.

As land resources are now known to be running out in Tshwane, there is stiff competition for land, and agricultural land has gradually been lost to equally competing needs, especially housing and industrial developments. This has a negative impact on expanding urban agriculture production and consequently on the efforts to address food and nutritional insecurity and promoting self-sufficiency.

Climate change exacerbates the dwindling agricultural productivity, necessitating the need to implement climate-smart agricultural practices and innovative techniques. However, some of the techniques are not within reach of smallholder farmers as these have proven to be costly.

The City has noted the need to bank land and intensify the implementation of the available agricultural programmes aimed at impacting hunger positively. In summary for Goal 2, the City also needs to keep on identifying strategic external partners for tailor-made programmes and efforts aimed at contributing significantly to ending hunger, achieving food and nutritional security, and promoting sustainable agriculture.

Finding creative ways of implementing a risk-based approach in the prioritisation of the most vulnerable communities with regard to the provision of primary healthcare services requires capacity augmentation, especially in prioritising critical health positions based on the outcomes of Goal 3. The strengthening of existing partnerships within the health sector, especially in service areas that have been severely impacted negatively by limited financial and human capital resources, must be done within the limits of the guiding legislation and finding new ways of supplying affordable opioid substitution therapy. This can include local manufacturing, product importation and price negotiations, all of which require engagement at state level, which remains key to the City. Work done on COSUP needs to serve as best practice.

Compounded by the negative impacts of climate change, equal access to an adequate supply of clean water is especially important, not just for public health but also for overall prosperity. Water connections remain a key challenge in the City to achieve water access for all. Recognising this imperative, the City established processes for handling applications from residents for water connections. In this regard, consumers apply for the installation of a new metered water connection when constructing a new building or dwelling on a stand in a developed and proclaimed area. The number of full-service metered water connections installed (backlogs) refers to the metered connections installed through the implementation of capital projects to upgrade water services to full-service metered connections. The full-service metered water connection per formalised stand refers to sufficient bulk infrastructure and reticulation that are available to provide the service.

Leveraging off on Goal 7 targets and outcomes, the emergence of solar photovoltaic, wind, battery storage, biomass and demand-response technologies as alternatives to large-centralised power stations present new opportunities for consumers to self-

generate energy (embedded generation), either by themselves or in partnership with other users in a micro-grid context – the concept of prosumer. Effective planning of micro-grid energy systems is critical to deploying optimal systems that meet energy access and sufficient needs of households and businesses alike. To achieve this, it is important to determine a least cost mix of options based on the expected dispatch of various available energy generation sources. Least cost electricity optimisation studies are underway in Tshwane to select the best resource mix (types and capacities) to inform energy investment decisions. A vision for the future energy system where bidirectional flows of power exist between consumers and utilities in a more integrated and decentralised power system of the future is possible only when adequate skills are available in the City.

The interventions implemented in the City in support of realising the objectives of Goal 11 influence some of the other goals. These interventions have proven to advance progress in other goals and there have been significant gains observed in the affected or interlinking goals. The interventions pursued by the City in its efforts to realise the aspirations of making Tshwane and human settlements inclusive, safe, resilient and sustainable inextricably link to Goal 9 in as far as the development of local infrastructure that supports sustainable, inclusive, safe and resilient human settlements is concerned.

In this regard, developing roads and transport infrastructure, building reservoirs and water treatment plants in localities and providing housing and serviced stands make a significant contribution to the realisation of Goal 9 targets, which focus on building resilient infrastructure. The City provides rudimentary water and sanitation services to residents residing in informal settlements in pursuit of alleviating the challenge of informality, and connects households to the main water and electricity grid, a critical intervention that supports the realisation of sustainable cities and communities, especially as this relates to access to adequate, safe and affordable basic services and contributes significantly to the achievement of the objectives.

Pivotal to the process of localising SDGs is the consistent application of the City of Tshwane Climate Action Plan to meet targets for Goal 13. Further, the integration of disaster risk reduction into national and local policies, especially aligning local strategies with overarching national frameworks, is crucial for comprehensive progress. This approach encompasses diverse metrics, including disaster impacts, adoption rates of local strategies, infrastructure resilience, capacity-building, policy integration, community well-being, innovation and global collaboration, facilitating regular and comprehensive assessments that provide insights into the effectiveness of climate action efforts and the City's journey toward building a resilient and sustainable future for Tshwane residents, supported by adequate budgets.

Given that the City has several strategic partnerships that cut across many of its thematic areas and departments, the City will need to leverage off of the strategic outcomes of Goal 17 and the localisation of the SDGS through VLRs better. This is also about strengthening internal City capacity (develop capacity for technical proposal writing and packaging of projects) to build and coordinate strategic relationships effectively and more collaboratively, with stronger interlinkages in the planning, budgeting and reporting processes. In other partnerships like BMW, the City needs to learn best practices from Buffalo City so that the best impact of partnerships can be realised.

The way forward

As part of the way forward, the City endeavours to further the localisation of the SDGs by focusing on a number of key issues which, among others, include –

- continuing the efforts that seek to integrate the SDGs in the strategic planning and implementation processes of the City;
- investing in efforts that will improve data availability and integrity; and
- expanding the efforts of sourcing data and monitoring trends to improve the review process and report on the progress made in the implementation of the SDGs.

The City will also mobilise new partnerships and engage on other strategic initiatives in order to accelerate progress made towards realising the SDGs.

Furthermore, making the VLR more inclusive and participatory is one of the key commitments that the City is making as part of its way forward.

In order to handle an effective VLR process, the City will also augment capacity for the coordination, facilitation and overall management of the VLR process end-to-end, including the write-up of the report.



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