



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD



CLIMATE CHANGE STRATEGY AND ACTION PLAN

ANNUAL IMPLEMENTATION REPORT

FINANCIAL YEAR 2023/24

Making progress possible. Together.

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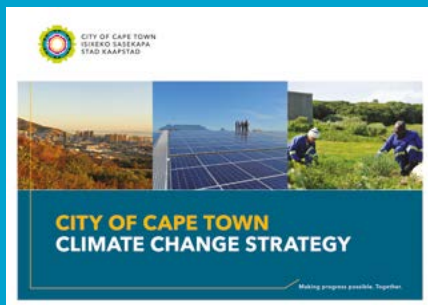
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INTRODUCTION

This is the third annual progress report on the implementation of the City of Cape Town Climate Change Strategy and Action Plan. The Climate Change Strategy was adopted by Council in May 2021, and the Climate Change Action Plan (CCAP) – a detailed programme-level implementation plan of the strategy – was approved by the City Manager in August 2021. Subsequently, a monitoring and evaluation framework was developed and approved, with the aim of both tracking progress against the actions contained in the Action Plan and monitoring evolving trends in indicators to assess whether the medium-term outcomes linked to the goals of the Strategy and Action Plan are being achieved. Two annual progress reports for the 2021/22 and 2022/23 financial years have already been published and presented to the City’s administrative and political leadership.

Climate Change Strategy and Action Plan:



Previous annual implementation reports:



This report will cover the following:

- ✓ A short overview of the local and global context since the previous progress report
- ✓ An assessment of progress towards achieving the 101 programme-level actions contained in the CCAP, including the four Climate Change Leadership Review actionsⁱ
- ✓ An assessment of progress against a set of 49 medium-term outcome indicators linked to the goals of the Climate Change Strategy and Action Plan

Drafted between September and December 2024, this report deals with the previous financial year, i.e. July 2023 to June 2024. However, to make the report as current as possible, Section 2 may include events that have occurred up until the time of drafting. In addition, as actions are implemented over a number of financial years, some sections may include discussion of processes that were initiated in previous years.

This reporting process is intended to serve multiple purposes. Firstly, it aims to determine whether the CCAP is on track and whether it requires amendment or updating, considering that the Action Plan is meant to be a 'living' document that is updated regularly to reflect any changes in the City's approach to climate change response. Secondly, the process aims to identify any significant implementation gaps so that these can be addressed and additional support – for example technical assistance or external finance – can be sought. Thirdly, it is intended to promote transparency regarding the City's climate change response work, and therefore, to support our existing reporting commitments through the CDPⁱⁱ and to our international partner organisations. Finally, the report aims to provide information to City staff and other local and regional stakeholders to ensure that those working on activities relating to climate change response remain up to date with regard to the City's progress.

i These actions target important strategic areas that need to be pursued by multiple departments through multi-stakeholder collaboration. The actions are located in highly transversal areas where it is important for the City, as an organisation, to show leadership in a citywide climate change action plan.

ii Initially established as the Carbon Disclosure Project, the CDP is a not-for-profit organisation that runs a global climate change response disclosure system for investors, companies, cities, states and regions. It is the main reporting platform for C40 member cities.

CONTEXT

Since the previous year's reporting, a number of significant events have occurred locally, nationally and internationally. Climate change response is a very fast-moving area of work, and therefore, any policy document or report will necessarily be somewhat out of date by the time it is published. As a result, this section of the annual progress report provides a much-needed updated context within which the City's implementation progress should be understood.

CLIMATE GOVERNANCE

INTERNATIONAL EVENTS

UNFCCC Conference of the Parties (COP) 28 and 29

The United Nations Framework Convention on Climate Change (UNFCCC) 28th Conference of the Parties (COP28) was held from 30 November to 12 December 2023 in Dubai, marking the halfway point between adopting the 2015 Paris Agreement and meeting the 2030 climate change action targets. The conference, therefore, concluded the first Global Stocktake of the world's efforts to address climate change under the goals of the Paris Agreement. The Global Stocktake found that current climate action efforts are insufficient, and that global greenhouse gas emissions need to be cut by 43% by 2030, compared to 2019 levels, to limit global warming to 1,5 °C.

COP28's main output was the United Arab Emirates (UAE) Consensus, an official document outlining the final decisions made during the negotiations. The Consensus was the first COP agreement directly referring to fossil fuels, including coal, oil and gas, and calling on all countries to transition away from these fuels. Some of the key components of the agreement, and highlights of the conference, include:

- ✓ the establishment and operationalisation of a Loss and Damage Fund;
- ✓ adding a new goal to triple renewables and double energy efficiency by 2030;
- ✓ emphasising the importance of reforming the multilateral financial landscape, and accelerating the ongoing establishment of new and innovative sources of finance; and
- ✓ approving targets relating to the global goal on adaptation as well as its framework.

Subsequently, COP29 was hosted from 11 to 22 November 2024 in Baku, Azerbaijan. The Parties adopted the Baku Climate Unity Pact, which consolidates a series of separate decisions taken at COP, including decisions on mitigation, adaptation and the new global goal for climate finance, which is explained in more detail below. Other key outcomes from COP29 include:

- ✓ reaching an agreement to fully operationalise Article 6 of the Paris Agreement on Carbon Markets, including approving the standards for creating carbon credits under Article 6.4, and ensuring that the credits represent real, additional and verified emissions reductions; and
- ✓ full operationalisation of the Fund for Responding to Loss and Damage, including resolving the trustee and hosting agreements with the World Bank, along with other procedural items regarding the relationship between COP and the Fund's board.

The new global goal for climate finance replaces the previous \$100 billion goal and commits developed countries to mobilise \$300 billion per year by 2035. This finance will include sources such as public funds, development bank loans and private finance. The \$300 billion/year target forms part of a larger goal to reach \$1,3 trillion/year by 2035, with the majority expected to flow from private financing.

However, some well-known global climate leaders expressed disappointment at both the processes and outcomes of COPs 28 and 29. In November 2024, a group of prominent scientists, advocates and policy leaders issued an open letter to the Executive Secretary of the UNFCCC. This followed remarks by the president of the COP29 host country that oil and gas are a “gift of God”, and news that an official of Azerbaijan’s COP Presidency had been using the event to advance fossil-fuel business deals. The open letter proposed several key reforms to ensure that future COPs deliver more effectively on agreed climate commitments, including strict eligibility criteria for host countries, improving implementation and accountability, more robust tracking of financial commitments, amplifying the voice of scientists, and enhancing equitable representation.

Sandrine Dixon-Declève, signatory to the letter, Executive Chair of Earth4All, and global ambassador of the Club of Rome, said: “We need a COP process that offers delivery, not delay. We demand COPs that are platforms for government and stakeholder ambition, not enablers of fossil energy contracts and growing greenhouse gas emissions. After 28 COPs, time is up on negotiations that don’t foster action and implementation.”¹

Other international events

A significant event leading up to COP29 was the 19th G20 Summit, themed “Building a Just World and a Sustainable Planet” and held on 18 and 19 November 2024 in Rio de Janeiro, Brazil. Among the key focus areas were climate financing, energy security and sustainable development. The G20 Summit was preceded by the U20 Summit hosted on 16 and 17 November, also in Rio de Janeiro. The U20 Summit is organised by Urban 20, an organisation aimed at facilitating discussions between countries and cities from the G20 so that cities can collectively inform G20 climate change related negotiations. The event was attended by mayors, urban leaders, and representatives from C40 Cities and the Global Covenant of Mayors, including the mayors of the cities of Johannesburg and Tshwane. The proceedings culminated in the U20 Communiqué, which was endorsed by 57 cities, including Cape Town, and subsequently presented to the G20 Presidency.

Another noteworthy global city gathering was the World Cities Summit from 2 to 4 June 2024 in Singapore under the theme “Liveable and Sustainable Cities: Rejuvenate, Reinvent and Reimagine”. The biennial World



COP29 was held in November 2024 in Baku, Azerbaijan.

Cities Summit is an exclusive platform for government leaders and industry experts to address liveable and sustainable city challenges, share integrated urban solutions and forge new partnerships. The City of Cape Town participated in this important event by sharing key climate action efforts and learnings, including the City's New Water Programme, energy security and resilience programme, digital transformation initiatives for advancing resilience, and various other actions.

Cape Town Executive Mayor Geordin Hill-Lewis also contributed to the C40 Cities Mayoral Roundtable, which took place in conjunction with the World Cities Summit 2024 as a platform for C40 mayors to engage on climate resilience initiatives being implemented in their cities, key challenges in advancing adaptation priorities, opportunities to scale current efforts, and how C40 and partners can strengthen support and collaboration to have a meaningful impact in communities. Cape Town received global recognition at the World Cities Summit. This came in the form of a "Special Mention" during the results ceremony for the Lee Kuan Yew World City Prize, which honours outstanding cities that are creating liveable, vibrant and sustainable urban communities. Mayor Hill-Lewis accepted the accolade on behalf of the City.

Moreover, the 16th Annual BRICS Summit took place from 22 to 24 October 2024 in Russia. Here, BRICS nations reaffirmed their commitment to addressing climate change by welcoming the establishment of the BRICS Contact Group on Climate Change and Sustainable Development as well as the adoption of the bloc's Framework on Climate Change and Sustainable Development. BRICS members also announced plans to establish the BRICS Climate Research Platform (BCRP).

Finally, various engagements relating to climate change in Africa took place in the course of 2024. These include the Climate Change Global Business Summit on Africa, the Standard Bank Climate Summit 2024, the Africa Multi-Stakeholder Conference on Carbon Markets, and the African Union Commission (AUC) consultation on the development of a Common African Position on Climate Change, Peace and Security. Additionally, South African President Cyril Ramaphosa attended the African Union Summit themed "Building resilient education systems for increased access to inclusive, lifelong, quality, and relevant learning in Africa", where the impacts of climate change in Africa were part of the discussions.



C40 Executive Director addressing the U20 summit.



Mayoral roundtable at the World Cities Summit.

NATIONAL CLIMATE CHANGE LEGISLATION AND POLICY DEVELOPMENT

Legislation and policy development

The Climate Change Bill was signed into law in July 2024, thereby becoming the Climate Change Act, which now serves as the country's statutory framework for responding to climate change. The Act stipulates the development of a climate change response implementation plan as a future requirement for South African metropolitan and district municipalities. It further envisions the establishment of municipal forums on climate change, which will be intended to (a) coordinate climate change response actions for those activities within the operational control of the relevant municipality; and (b) provide a report on such actions to the relevant provincial forum on climate change.

Although the Act does not currently prescribe the structure of municipal forums on climate change for metropolitan municipalities, it is in the City's interest to have a structure in place that fulfils the functions of such a forum. This is why the City initiated a process in 2024 to establish an internal Climate Change Response Forum for the coordination of climate change response activities as well as the monitoring and evaluation of the City's Climate Change Strategy and Action Plan (see section 2.1.4 below for more).

In addition to requiring municipal climate change needs-and-response assessments and climate change response implementation plans, the Climate Change Act also prescribes national-level sector adaptation strategies and plans. These will identify and spatially map risks and vulnerabilities for a specific sector, and will include measures to manage and implement recommended adaptation responses for implementation by all affected spheres of government. The Act outlines the national departments and state-owned entities that will be required to develop these plans, including sectors such as fisheries, environment, education, energy, tourism and transport. This has led the national Department of Forestry, Fisheries and the Environment to initiate the development of adaptation response plans for the coastal sector, and they are currently conducting national stakeholder engagement workshops on coastal climate adaptation response plans (CARPs). The development of CARPs is also in line with the requirements of the Integrated Coastal Management Act and informed by the National Climate Change Adaptation Strategy.

The draft National Climate Change Gender Action Plan is currently undergoing public consultation to identify challenges, gaps, and priorities for implementation. The aim of the plan is to ensure that gender considerations are integrated into climate change policies, programmes and strategies, in addition to enhancing gender mainstreaming in South Africa's Nationally Determined Contributions (NDCs). The plan is based on the outcomes of previous work, stakeholder consultations, and the National Dialogue for Gender-Climate Mainstreaming conducted in July 2022.

National Treasury, in turn, commenced with a public participation process for the Carbon Tax Discussion Paper, focused on phase 2 of the carbon tax design for implementation in the period 2026 to 2035. The discussion paper includes proposed adjustments to the basic tax-free allowance, carbon offsets, the electricity levy, the renewable-energy premium, and the energy-efficiency savings tax incentive. Carbon tax increases took effect on 1 January 2024 for the 2024 calendar year, increasing from R159 to R190 per metric ton of carbon dioxide equivalent (tCO₂e). In addition, the carbon fuel levy also increased by 11c per litre for petrol and 14c per litre for diesel, effective since April 2024. According to the Carbon Tax Act, the carbon tax rate will increase annually based on consumer price inflation, starting from 1 January 2023.

Finally, the Department of Mineral Resources and Energy (DMRE) published the draft Integrated Resource Plan (IRP) 2023 in January 2024, and the subsequent two-month public participation process concluded on 23 March 2024. The comments were integrated into an updated IRP 2024 version before engaging the

National Economic Development and Labour Council, directors-general and ministerial clusters. DMRE aims to finalise and present the updated plan to Cabinet for final approval before the end of 2024. The IRP is a 'living' document that outlines South Africa's plan for electricity infrastructure and capacity development, focusing on electricity demand, supply and cost.

The Framework for a Just Transition in South Africa

Globally, much attention is being paid to ensuring that the transition towards cleaner energy takes place in a way that is fair, equitable and inclusive, with a particular focus on the livelihoods of those currently working in the fossil-fuel value chain. At the same time, it is recognised that the most vulnerable groups – economically and socially – are disproportionately at risk from the impacts of climate change, and so climate change response programmes must prioritise these populations' needs.

The **Framework for a Just Transition in South Africa ('the Framework')** was developed by the Presidential Climate Commission (PCC) and approved by Cabinet in September 2022. The framework provides a shared vision and guidelines to collectively achieve an equitable and climate-resilient transition across government spheres and sectors. The framework defines a just transition as one that "aims to achieve a quality life for all South Africans, in the context of increasing the ability to adapt to the adverse impacts of climate, fostering climate resilience, and reaching net-zero greenhouse gas emissions by 2050, in line with best available science".

It is important to recognise that municipalities carry substantial risk from the transition, but also present significant opportunities both to accelerate the transition and make it more just. South Africa is highly urbanised, and most economic activity takes place in urban areas. Accordingly, emissions generated by cities account for a significant portion of national emissions. In addition, municipalities interface with customers and collect revenue; the stability of the national system relies on urban utilities providing reliable services and collecting revenue.

The principles of the Framework for a Just Transition as well as the notion of a just urban transition therefore intersect and build on many developmental objectives of cities. As a result, they are firmly embedded in the City's Integrated Development Plan (IDP) 2022-2027. Furthermore, key City strategies such as the Climate Change Strategy and Action Plan (2021) and the Energy Strategy (2023) acknowledge that working towards a just transition needs to be a core component of the City's climate change response, and have allocated actions accordingly in its implementation plans. These include fostering the creation of green jobs, promoting sustainable and equitable land use, safeguarding residents' health and wellbeing, and ensuring access to affordable essential services and opportunities.

MINISTER GEORGE ANNOUNCES PROCLAMATION AND IMPLEMENTATION OF THE CLIMATE CHANGE ACT, 2024 (ACT NO. 22 OF 2024)

Dr Dion George is pleased to inform the members of the public that the President, His Excellency Cyril Ramaphosa, has proclaimed the Climate Change Act, 2024 (Act No. 22 of 2024) (the Act).






 Dr Dion George MP
 @Dr_Dion_George
www.dffe.gov.za

MINISTER GEORGE ANNOUNCES PROCLAMATION AND IMPLEMENTATION OF THE CLIMATE CHANGE ACT, 2024 (ACT NO. 22 OF 2024)

“The Act represents a critical milestone not just for environmental sustainability, but for economic development and job creation. We are committed to ensuring that climate action becomes a catalyst for driving economic growth, creating jobs, and building a sustainable future for South Africa. - Dr Dion George






 Dr Dion George MP
 @Dr_Dion_George
www.dffe.gov.za



The role of the Presidential Climate Commission (PCC)

The PCC was established in December 2020, comprising government ministers and representatives from major stakeholder groups in South Africa, including business, labour, civil society, research and academic institutions, youth, and traditional leadership. The concept of the PCC emerged at South Africa's 2018 Presidential Jobs Summit, when social partners agreed that a statutory body should be established under the Presidency to maximise the opportunities for creating new and quality jobs in the context of a just transition to a low-carbon economy and climate-resilient society.

The PCC is supported by a secretariat that advances its agenda by commissioning research and policy work, arranging robust dialogue and consultation processes, and preparing strategic communications. The commission meets on a quarterly basis, whereas ad hoc working groups – such as Finance and Governance; Net-Zero Pathways; Monitoring, Evaluation and Reporting; Climate Finance – meet more frequently.

Cape Town Mayor Hill-Lewis serves as one of two local government representatives on the PCC, in collaboration with the South African Local Government Association (SALGA). In this role, the City of Cape Town is playing a crucial part in ensuring that the needs and challenges of local government are considered. During the reporting year, the City has taken an active part in various PCC-related engagements and projects, including:

- ✓ participating in the PCC's Mayors' Dialogue on a Just Energy Transition (JET);
- ✓ engaging the PCC Project Management Unit on the City's energy transition work;
- ✓ participating in the SA PCC Municipal Just Energy Transition Support Programme as one of eight pilot cities;
- ✓ commenting on the Municipalities Chapter of the PCC's Draft Just Energy Transition Implementation Plan (JET-IP); and
- ✓ participating in various workshops, including a Western Cape SALGA workshop titled "Just Transition and its Implications for Local Government", and a South African Cities Dialogue titled "Building City Resilience Through a Just and Equitable Transition", co-hosted by C40, SALGA and PCC.

The most recent focus of the PCC's work has been the finalisation of the JET-IP. The five-year implementation plan (2023-2027) sets out the scale of need and the investments required to achieve the decarbonisation commitments in South Africa's NDCs. During the reporting year, the PCC also produced a State of Climate Action report and a set of recommendations for a proposed Just Transition Financing Mechanism. At the time of reporting, the development of a Climate Change Response Fund, a municipal JET state-of-readiness pilot project as well as a consultation process on NDC recommendations were also under way.



The City of Cape Town participated in the South African cities dialogue event on building city resilience through just and equitable transition, hosted by C40, SALGA and the PCC.

WESTERN CAPE PROVINCIAL CLIMATE CHANGE POLICY DEVELOPMENT

Climate change was added as a permanent item to the Cabinet agenda of the Western Cape Provincial Government ('Province') on 6 March 2024 to help streamline climate governance and ensure that sufficient finance and resources are allocated to respond to the increasing risk of climate-related extreme events across the province. The announcement was made by Anton Bredell (MEC for Local Government, Environmental Affairs and Development Planning) at the inaugural Climate Change Indaba on 9 March 2024. At the same event, Ministers Bredell and Ivan Meyer (MEC for Agriculture) co-signed a pledge to reiterate Province's commitment to low-carbon, climate-resilient development and collaboration with all sectors.

The Climate Change Indaba brought together stakeholders from business, the private sector, research institutes and relevant representatives from local and national government. Building on an internal government workshop held in December 2023, the event focused on ways to jointly realise the vision of the Western Cape Climate Change Response Strategy and Implementation Plan, namely to achieve net-zero emissions and climate resilience for the province by 2050.



Credit: WCG Department of Agriculture Communications Unit

Western Cape Government Ministers Bredell and Ivan Meyer co-signed a pledge to reiterate Province's commitment to low-carbon, climate-resilient development and collaboration at the inaugural Climate Change Indaba in March 2024.

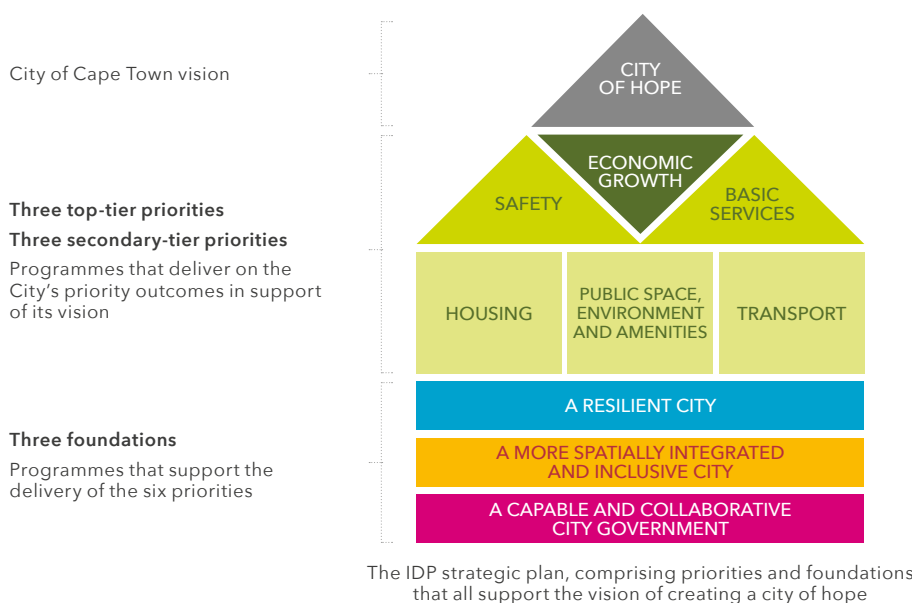
LOCAL GOVERNANCE OF CLIMATE CHANGE RESPONSE

The monitoring, evaluation and reporting of the City of Cape Town Climate Change Strategy and Action Plan is coordinated by the City's Risk and Resilience Department, under a transversally functioning directorate called Future Planning and Resilience (FPR). This followed a Council resolution in early 2022 to implement organisational restructuring so as to align with the current term's set of priorities. During 2022/23, additional organisational realignment took place, with the City's Integrated Risk Management and Business Continuity Management functions joining FPR as a merged Risk and Resilience Department. The consolidation of these functions now offers increased opportunities for mainstreaming climate risk considerations into the City's integrated risk management processes.

Climate change response has increasingly been integrated and mainstreamed into the City's IDP. The current IDP (2022-2027) includes a dedicated programme on climate change planning and monitoring under the "Resilient City" foundational priority. Programmes that contribute to climate change response have been tagged within the IDP, and their link to the City's CCAP actions has been identified. The Risk and Resilience Department is continuously exploring how to further integrate climate change response into the IDP reporting process, building on the institutional progress achieved in previous years.

Over the past two years, a number of steps have also been taken to integrate climate risk into the City's project management process, including an assessment of both the three-year and ten-year capital projects portfolio. The assessment identified various areas where the City is currently investing in climate change response – most notably water resilience – and also highlighted some gaps where additional investment is required. As a result, a guidebook was developed to help project managers consider climate resilience in the project management process. A climate budget tagging process was also carried out for the three-year capital budget. Together, these processes and resources are meant to support the stronger integration of climate change response into future service delivery programmes and projects. In addition, the City's policy process now incorporates the consideration of climate change and sustainability objectives in the development of all relevant strategies, policies and by-laws.

Finally, during the reporting year, the Risk and Resilience Department embarked on a process to establish an internal Climate Change Response Forum to enhance the coordination of City-wide climate change response activities, monitoring, reporting and knowledge-sharing. Considering the cross-cutting nature of climate change, various City departments were nominated as forum members. The inception meeting of the forum took place on 25 November 2024.







GREENHOUSE GAS EMISSIONS

STATE OF CAPE TOWN'S GREENHOUSE GAS EMISSIONS

Cape Town's greenhouse gas (GHG) emissions are reported to the Carbon Disclosure Platform (CDP) annually. Consistent with global best practice, the data is drawn from a GHG inventory prepared according to the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC) methodology. The CDP reviews the quality of the annual submissions and, in November 2023, awarded the City of Cape Town an A-rating for its 2023 submission. Cape Town was the only African city to receive this rating in 2023.

The most recent inventory update was completed in June 2024 (based on 2022 data). Figure 1 shows the trends in total and per capita emissions versus their respective target trajectories. Despite a rebound from suppressed demand during Covid-19, these remain on track. The 0,8% increase in total citywide emissions from 2021 to 2022 was marginal and primarily attributable to a 9% increase in transport emissions, offset by a 4,3% drop in electricity consumption emissions driven by load-shedding. Interestingly, the high degree of load-shedding implemented in 2022 meant that customers were disconnected from the electricity grid 10% of the time. The fact that power consumption did not drop by as much as expected indicates the impact of battery inverters and load rebound.

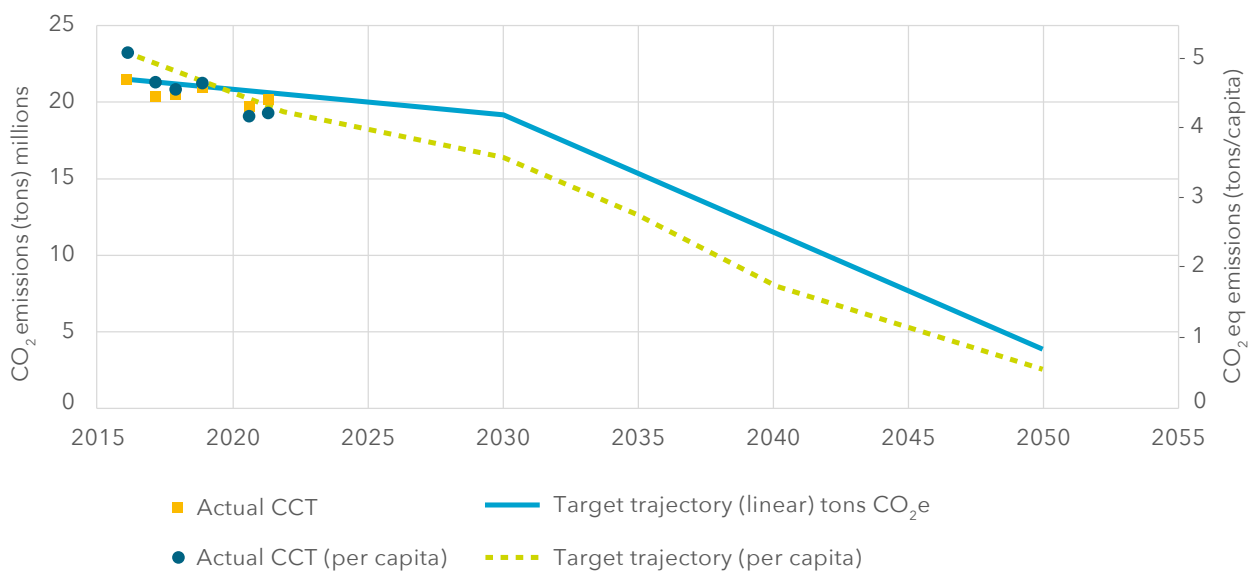
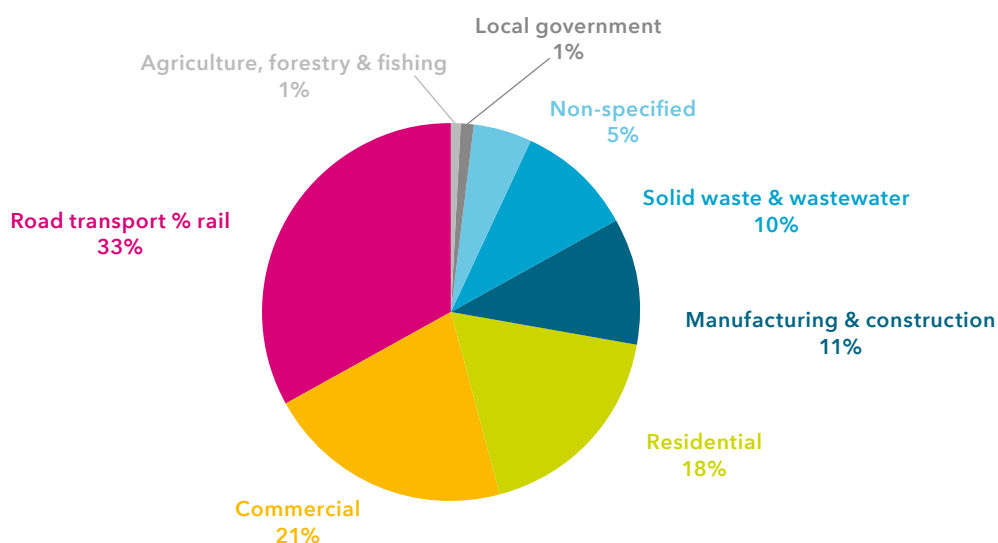
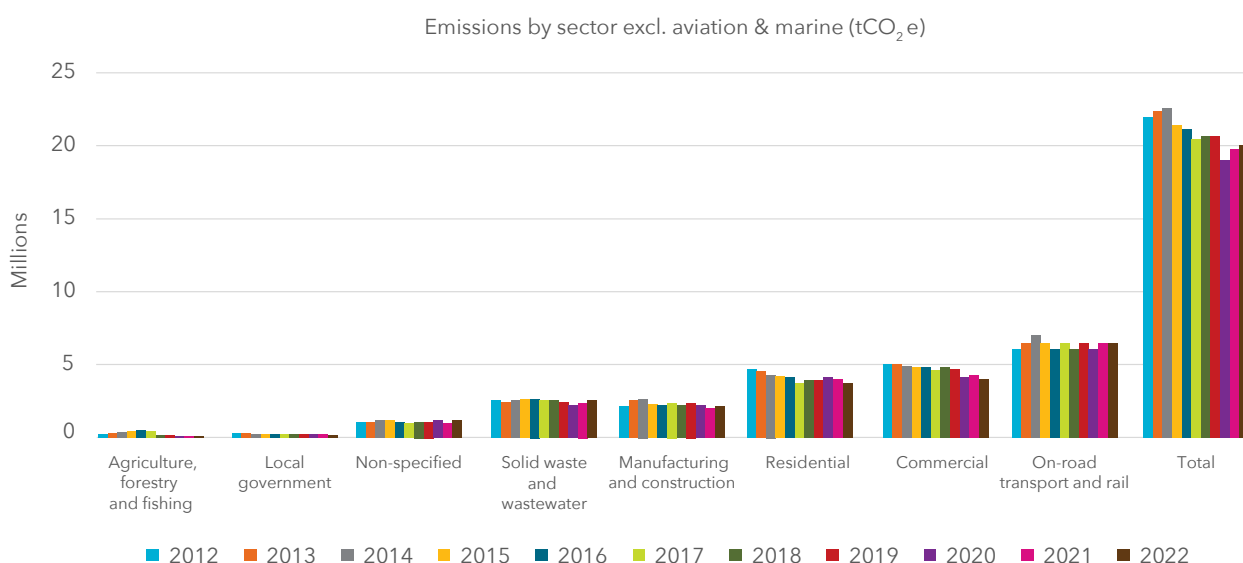


Figure 1: City of Cape Town progress against carbon targets, 2016-2022

Sectoral emissions shares, shown in Figure 2, remained much the same. Transport remained the largest emitting sector, but electricity consumption by the residential, commercial and industrial sectors accounted for half of all GHG emissions.

Emissions (CO₂e) by sector (excl. aviation & marine)**Figure 2: Sectoral GHG emissions contributions for Cape Town, 2022**

The trends in absolute emissions by sector (Figure 3) illustrate the impact of the Covid-19 pandemic and the ensuing rebound, particularly for transport emissions. While this trend may place pressure on realising targets, the substantial restoration of rail infrastructure by the Passenger Rail Agency of South Africa (PRASA)² may help abate transport emissions growth as Cape Town continues to expand rapidly.

**Figure 3: Sectoral trends in GHG emissions for Cape Town, 2012-2022**

Load-shedding was extremely severe in 2023: Varying levels of rolling blackouts were implemented for 6 820 hours of the 8 760 hours in the year, or around 77% of the time. Therefore, a drop in electricity consumption emissions can be anticipated for the 2023 data year, although it will be somewhat offset by the diesel used by on-site generators. This is, however, difficult to estimate.

By November 2024, the country had experienced over 200 days without load-shedding, and Eskom's adequacy outlook assessed the probability of severe load-shedding to be low in the short and medium term. Restored reliability of supply as well as ongoing migration into Cape Town could see a rebound in emissions in 2024 and beyond, depending on the technology that underpins new generating capacity locally and nationally. Nevertheless, the accelerated uptake of particularly residential small-scale embedded generation (SSEG) in Cape Town in response to load-shedding (Figure 4) will have a long-term muting effect.

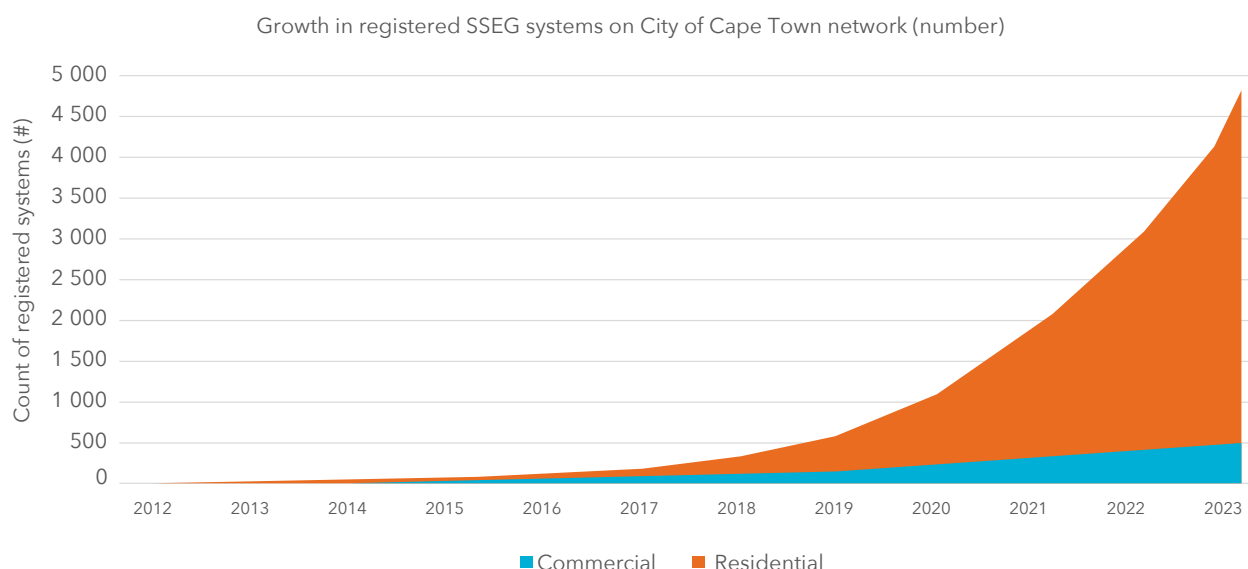
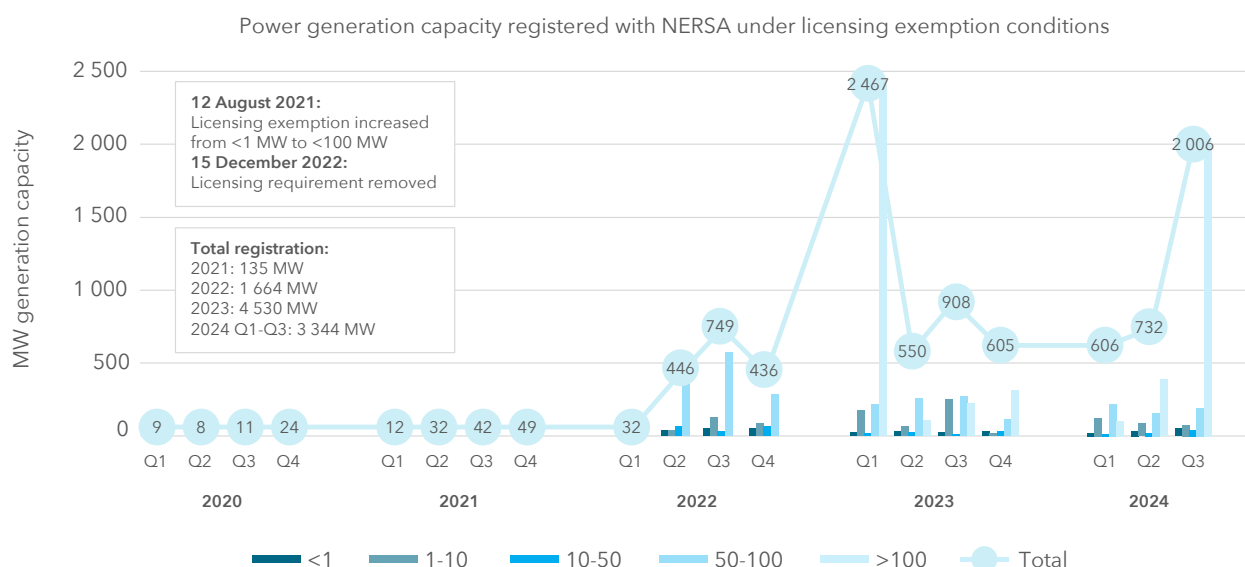


Figure 4: Exponential growth in registration of residential SSEG systems on the City of Cape Town's supply network

At a national level, the load-shedding crisis combined with the reform of the Electricity Regulation Act to remove the obligation to license power projects with the National Energy Regulator of South Africa (NERSA) has led to a dramatic increase in renewable-energy projects, as shown in Figure 5.³ While official figures for the maturity or operating status of this capacity do not exist, even a minor fraction will have a large impact on grid emissions. Yet this will only be the case if the renewable energy is made available on the wholesale market, instead of being wheeled to large commercial customers.



Source: Montmasson-Clair, based on NERSA data

Figure 5: Electricity Regulation Act licence-exempt projects registered with NERSA, 2020-2024

A more detailed exploration of Cape Town's energy and carbon emissions can be found in the 2021 Cape Town State of Energy and Carbon report, produced by the City's Sustainable Energy Markets Department. The report, which is updated every five years, profiles Cape Town's energy system in detail and directly supports the goal of a data-driven and evidence-led administration. It informs the City's GHG inventory and climate mitigation planning and can be utilised by decision-makers, researchers and planners. The report is published on the City's website in [publication format](#), and in data format on the administration's [Open Data Portal](#). The contract with a service provider to execute the 2025 State of Energy and Carbon report is in process, and the report is anticipated to be published in late 2025.

CAPE TOWN'S CARBON EMISSIONS REDUCTION TARGETS

As part of its 2021 CCAP, Cape Town adopted a science-based target (SBT) for reducing GHG emissions. SBTs have emerged from the collaborative efforts of a number of organisations worldwide to ensure that subnational entities' target-setting processes are consistent, have integrity, and align with the goals of the Paris Agreement. Currently, three main methodologies are recognised and being integrated into the CDP reporting and evaluation process. As a C40 member city, Cape Town adopted the C40 Deadline 2020 Framework, which assigns a decarbonisation trajectory according to the socioeconomic typology allocated to C40 members. The typologies are primarily based on income and reflect a city's state of economic development and resulting capacity to transition in the short term.

According to this typology system, Cape Town is regarded as a "late-peaking developing city", meaning modest growth up to 2030 at the margin of the emissions reduction target envelope, and rapid reduction in absolute emissions thereafter. The City has set targets within this typology envelope through a comprehensive technical process that was presented to the Executive Management Team in September 2020. This supplemented an extensive scenario-based decarbonisation modelling exercise undertaken during the CCAP planning phase, with additional analyses including benchmarking and an assessment of uncertainty in the sectoral emissions systems of electricity and buildings, transport and waste.

Based on this process, the City has set the following 2030 and 2050 emissions reduction targets, summarised below with an indication of progress:

Target	Target year	Baseline emissions (2016)	Emissions in most recent reporting year (2022)	Target trajectory emissions	% of target achieved
9,4% absolute cut in emissions (off a 2016 baseline)	2030	21 252 347 tCO ₂ e	19 911 218 tCO ₂ e	19 252 347 tCO ₂ e	67%
81% absolute cut in emissions (off a 2016 baseline)	2050	21 252 347 tCO ₂ e	19 911 218 tCO ₂ e	4 000 000 tCO ₂ e	8%

While a 9,4% (equating to 2 metric tons) absolute emissions cut by 2030 may seem modest in the context of the Paris Agreement - which requires global average cuts of 40-60% - Cape Town's population growth must be accounted for. If the current 2% annual population growth rate persists, which is likely, this equates to a 30% decrease in per capita emissions, which is appropriately challenging for the current local economic circumstances.

While a high share of the 2030 target has seemingly been achieved, an upturn in economic growth and continued population growth could change the picture considerably on even a five-year view. The key driver in the next seven years is electricity supply and demand. As shown in Figure 6, the magnitude of the shift required in the electricity sector depends on transport and waste emissions. If emissions from these two sectors increase modestly or decline slightly, it is estimated that attaining the target will require only a net 10% energy-efficiency improvement, combined with 7% clean electricity supply from locally procured or produced renewable generation, including SSEG. However, population-indexed growth in transport and waste emissions would require either a bigger energy-efficiency improvement of 22% or a greater renewable-electricity share of 20%.

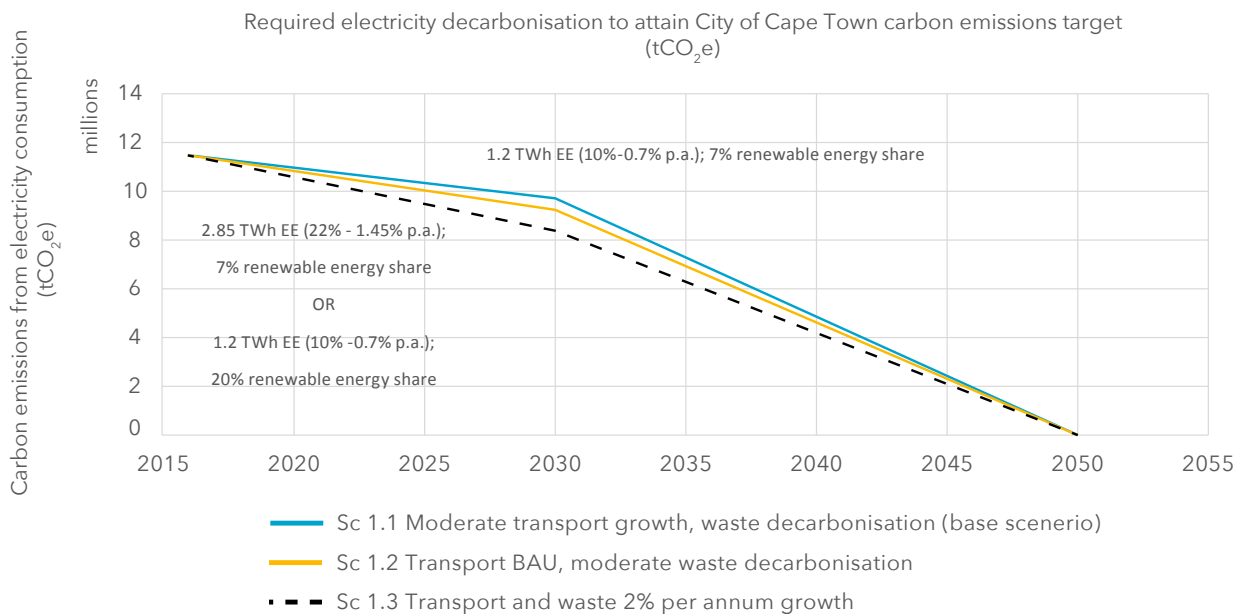


Figure 6: Electricity's contribution to City of Cape Town's 2030 carbon emissions reduction target for three scenarios of transport and waste emissions growth

The City's direct contribution to the 2030 target relies on the enablement of the supply of renewable electricity – whether City-owned, procured by the City through independent power producers or traders, or wheeled to customers. The severity of load-shedding in 2022 and 2023 accelerated the City's planning and implementation of energy supply-related projects within the framework of the Mayor's priority programme for energy. The first contract of 30 MW was awarded in 2024 at a rate lower than Eskom-supplied electricity. Procurement processes for a further 62 MW are in process, and the City is also exploring the procurement of energy from dispatchable and existing generators.

Additionally, a 7 MW City-owned photovoltaic (PV) plant is being constructed in Atlantis, while a second solar PV plant in Paardevlei (Somerset West), which could yield 30–50 MW, is in the planning phase. The Paardevlei project is currently the subject of specialist feasibility studies with support from the C40 Cities Finance Facility and the German Corporation for International Cooperation (GIZ). Furthermore, the City continues to roll out SSEG systems for municipal facilities, with some 1,4 MW already commissioned. A tender to procure power from traders is also under way.

Approaching the end of 2024, risk on the supply side had been somewhat tempered by 210 days without load-shedding, along with a rapidly changing supply sector and regulatory landscape at national level. A wholesale electricity market model was proposed by the newly established National Transmission Company of South Africa (currently serving as transmission system operator under the Electricity Regulation Amendment Act of 2024). Strongly driven by the Presidency, these reforms are designed to ensure both more reliable and lower-carbon electricity supply. From an investment perspective, however, a market could change the reference price for energy – currently Eskom's municipal rate – making business cases uncertain.

Overall, however, there remains reason at this stage to be optimistic that the load-shedding crisis, albeit damaging in the short term, will cause the local electricity system to become more resilient and the interim carbon target to be exceeded, even if transport and waste emissions may increase significantly for the time being.







CLIMATE SCIENCE

IPCC SEVENTH ASSESSMENT REPORT (AR7) CYCLE

The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) cycle concluded on 20 March 2023 with the release of the synthesis report. The report was used to inform the 2023 Global Stocktake under the UNFCCC. Several key pieces of work completed during the AR6 cycle were eventually incorporated into the synthesis report. These included [Climate Change 2021: The Physical Science Basis](#) (produced by Working Group I), [Climate Change 2022: Impacts, Adaptation and Vulnerability](#) (Working Group II), and [Climate Change 2022: Mitigation of Climate Change \(Working Group III\)](#).

In addition, three cross-working group special reports were completed during AR6. These were the [Special Report on Global Warming of 1.5 °C](#) (SR15, October 2018), the [Special Report on Climate Change and Land](#) (SRCCL, August 2019), and the [Special Report on the Ocean and Cryosphere in a Changing Climate](#) (SROCC, September 2019). The AR6 cycle also saw an update to the IPCC's methodologies with the release of the [2019 Refinement to the 2006 Guidelines on National Greenhouse Gas Inventories](#) (May 2019).

AR7 officially commenced in July 2023 with the election of the IPCC and taskforce bureaus at the IPCC's plenary session in Nairobi. At the subsequent 60th IPCC plenary session in January 2024 in Istanbul, over 300 delegates from 120 countries agreed on the programme of work for AR7, which will again include reports from all three working groups, working towards the release of a synthesis report in 2029. During AR6, it was also agreed that two special reports would be compiled during AR7, namely the [2027 IPCC Methodology Report on Inventories for Short-lived Climate Forcers](#) and a [Special Report on Climate Change and Cities](#). Further outputs planned for AR7 are the Methodology Report on Carbon Dioxide Removal Technologies, Carbon Capture Utilisation and Storage, as well as a revision of the 1994 IPCC technical guidelines on impacts and adaptation, including adaptation indicators, metrics and guidelines.

The AR7 Special Report on Climate Change and Cities in particular will be an important document for cities around the world that are faced with the dual challenges of mitigating and adapting to climate change. As agreed at the 61st session of the IPCC, the report will include the following chapters:

- ✓ Cities in the context of climate change: framing of the report
- ✓ Cities in a changing climate: trends, challenges and opportunities
- ✓ Actions and solutions to reduce urban risks and emissions
- ✓ How to facilitate and accelerate change
- ✓ Solutions by city types and regions

EXTREME-EVENT ATTRIBUTION STUDIES

Extreme-event attribution is a growing area of climate science that is becoming increasingly necessary in a rapidly changing global climate. The goal of these studies is to scientifically determine whether, and to what extent, extreme weather events are linked to climate change, and therefore, to better understand the role that long-term climate change is playing in the occurrence of extreme weather events. It is important to note that climate change is not the cause of extreme weather events. Rather, climate change significantly increases the frequency and intensity of extreme weather events, meaning that these occur more often and more severely than in a hypothetical world without any climate change.

Since 2014, the World Weather Attribution (WWA) initiative has developed and implemented methods to conduct extreme-event attribution quickly yet thoroughly. This is to address the challenge posed by the traditional scientific publishing model in which “scientific studies, going through peer-review, are usually published a year or longer after an event occurred, when the public has moved on and questions about rebuilding or relocating have been answered without taking scientific evidence on the role of climate change into account”.⁴

The WWA applies a scientific approach that combines observational data, analysis of a range of models, peer-reviewed research and on-the-ground reports. Their criteria for conducting an analysis of an event includes that:

- ✓ the event must have had significant impacts on people;
- ✓ there is enough data available to understand what happened in terms of the meteorology so as to define the event, and enough historical observations to put the event in context; and
- ✓ there is output of a model that is in principle capable of describing the event.

Similar to previous reporting years, 2023/24 saw a number of high-profile extreme weather events occurring across the globe, including severe fires, intense heatwaves and significant flooding. Analyses conducted by the WWA during the year in review found that climate change either caused or exacerbated the following weather events:ⁱⁱⁱ

Drought and water scarcity

- ✓ Extreme drought in Sicily and Sardinia (September 2024)
- ✓ Drought in Syria, Iraq and Iran (November 2023)

Extreme heat, heatwaves and wildfires

- ✓ Pantanal (Brazil) wildfires (August 2024)
- ✓ A deadly Mediterranean heatwave (July 2024)
- ✓ Extreme heat in Mexico, killing more than 100 people (June 2024)
- ✓ Deadly heatwaves across Asia (May 2024)
- ✓ An extreme Sahel heatwave (April 2024)
- ✓ Dangerously humid heat in southern West Africa (March 2024)
- ✓ Deadly wildfires in central Chile (February 2024)
- ✓ Exceptional drought in the highly vulnerable Amazon river basin (January 2024)
- ✓ Extreme heat in highly vulnerable Madagascar (November 2023)
- ✓ Uncharacteristic early spring heat in South America (October 2023)
- ✓ Extreme fire weather conditions in May and June 2023 in Eastern Canada (August 2023)
- ✓ Extreme heat in North America, Europe and China (July 2023)

ⁱⁱⁱ The dates in brackets indicate when the studies were published.

Heavy rainfall and flooding

- ✓ Typhoon Gaemi in the western Pacific region (August 2024)
- ✓ Landslide-triggering rainfall in northern Kerala, India (August 2024)
- ✓ Severe floods in southern Brazil (June 2024)
- ✓ Heavy autumn and winter storm rainfall in the United Kingdom and Ireland (May 2024)
- ✓ Severe East African floods (May 2024)
- ✓ Heavy precipitation in the UAE and Oman (April 2024)
- ✓ Extreme rainfall associated with flooding in Midleton, Ireland (February 2024)
- ✓ Heavy precipitation associated with Storm Bettina over the Black Sea (January 2024)
- ✓ Flooding in Horn of Africa (December 2023)

In addition, the WWA also highlighted events where there was no clear evidence that climate change had played a role, or where a lack of sufficient data or high levels of uncertainty in climate models in the relevant region made it difficult to determine whether climate change had had an impact. These included the following:

- ✓ Deadly flooding in Afghanistan, Pakistan and Iran, which were linked to El Niño and high vulnerability (June 2024)
- ✓ Low water levels in the Panama canal, which were due to increasing demand exacerbated by an El Niño event (May 2024)
- ✓ Drought in highly vulnerable Southern African countries, largely driven by El Niño (April 2024)

Full details of all the studies mentioned above, including the methodologies used, are available on the WWA website at www.worldweatherattribution.org.

SIGNIFICANT WEATHER AND CLIMATE EVENTS

As noted in the section above, it is not always straightforward to determine whether individual extreme events are linked to climate change or are simply due to natural variations in weather patterns.

However, the IPCC AR6 Working Group 1 report notes the following: “Regional changes in the intensity and frequency of climate extremes generally scale with global warming. New evidence strengthens the conclusion from the IPCC Special Report on Global Warming of 1,5 °C (SR1.5) that even relatively small incremental increases in global warming (+0,5 °C) cause statistically significant changes in extremes on the global scale and for large regions (high confidence). In particular, this is the case for temperature extremes (very likely), the intensification of heavy precipitation (high confidence) including that associated with tropical cyclones (medium confidence), and the worsening of droughts in some regions (high confidence).”

As a result, it is reasonable to anticipate that extreme weather events will increase in both intensity and frequency as climate change continues.

GLOBALLY SIGNIFICANT WEATHER EVENTS

Extreme heat, heatwaves, drought and wildfires

Extreme heat worsens drought conditions and increases wildfire risk, indicating the interconnected nature of these climate change hazards and impacts. During 2023/24, a number of unprecedented heat events globally were also linked to droughts and severe wildfires in a number of different areas.

The global average temperature for the boreal summer of June to August 2024 was the highest on record at 0,69 °C above the 1991–2020 average,⁶ and July 2024⁷ was the hottest month ever recorded. Temperatures were above average over Southern and Eastern Europe, East Antarctica, Texas, Mexico, Canada, Northeast Africa, Iran, China, Japan and Australia. Extreme heat conditions coincided with a total of 52 individual prolonged meteorological drought events detected over the period August 2023 to July 2024,⁸ with major and record-breaking droughts experienced in both South and North America, Central and Eastern Asia, and Central Africa.

Countries across Asia experienced extreme heat conditions from March to June 2024. India saw record-breaking temperatures, with 37 cities surpassing 45 °C. These conditions were also associated with water shortages as demand spiked and prolonged high temperatures affected supply. The country also experienced its worst ever and longest-running heatwave on record, lasting 24 days across different parts of the country, where day-time temperatures reached 45–50 °C and night-time temperatures remained at a record high of 37 °C.

Several parts of the Mediterranean and Europe, including Greece, Italy, the Canary Islands, Spain, Turkey and Cyprus, experienced temperatures exceeding 40 °C, with some Italian cities issuing the highest heat alert level available for the country.¹⁰ The extreme heat conditions caused widespread wildfires in countries such as Greece, fuelled by a mix of high temperatures, strong winds, and land left parched by the very hot and dry summer. Extreme heat also affected the 2024 Paris Olympics:¹¹ There were concerns for the health and safety of athletes and spectators during outdoor sports events, and in the Athletes’ Village, cooling measures were inadequate to deal with the consistent heat in the city.

In the southwestern parts of the United States, Mexico, and the northern countries of Central America, several temperature records were broken during a consistently hot summer. On 7 July 2024, 70 million Americans were under a heatwave alert, with Death Valley National Park in California registering 53,3 °C, and temperatures in Las Vegas, Nevada, reaching 48,3 °C.¹² The 2024 South American wildfires were the second-largest series of wildfires for the 21st century, affecting countries such as Bolivia, Brazil, Chile, Colombia, Ecuador and Peru. These wildfires were fuelled by the effects of climate change and the 2023/24 South American drought. Canada's 2023 wildfire season¹³ ended in November 2023 and was marked as the most destructive on record. Record high temperatures and widespread drought conditions influenced the intensity of the fires, which burned through 15 million hectares of land. The 2024 fire season started earlier and burned through 5,3 million hectares, which is less severe than the previous year, but still one of the worst fire seasons on record.

Extreme heat conditions were experienced across several parts of Africa in March and April 2024, most notably in the Sahel region and West Africa, with temperatures reaching 48,5 °C in Mali during a five-day heatwave. While extreme heatwave conditions are said to be somewhat rare in Mali, this specific heatwave was driven by a combination of the influence of climate change and El Niño.¹⁴ In Egypt, in the southern province of Aswan, temperatures reached close to 50 °C, which had such a significant impact on energy use that the national government imposed daily power cuts to avoid electrical grid overload, leaving the region without power supply.¹⁵

Extreme rainfall, flooding and storm events

Significant flooding, rainfall and storm events took place in numerous parts of the world in 2023/24, including a particularly intense Atlantic hurricane season from June to November 2024. Fifteen named storms formed, ten of which became hurricanes, and four intensified to become major hurricanes.^{iv} Ten storms made landfall during this period. Hurricane Beryl, formed at the end of June, became the earliest-forming Category 4 hurricane on record. In early July, it strengthened to become the earliest-forming Category 5 hurricane ever recorded, and only the second ever Category 5 hurricane to occur in July.¹⁶ This is significant, as ocean temperatures are typically not high enough at that time of year for major hurricanes to form; in 2024, however, ocean temperatures reached record highs.

Hurricane Helene made landfall as a Category 4 hurricane on 26 September. It affected multiple southeastern regions of the United States, and ultimately became the deadliest hurricane to hit the mainland since Hurricane Katrina in 2005, with at least 180 deaths recorded to date. Of particular note was the significant impacts that occurred in North Carolina – a mountainous region inland and far away from coastal areas, where hurricane impacts are typically felt. Here, the historic town of Asheville was severely damaged, over a million residents were left without electricity for a week, and power grids and water distribution networks were destroyed.

Shortly thereafter, Hurricane Milton formed and rapidly intensified to Category 5, becoming the fifth most intense Atlantic hurricane on record. It made landfall in Florida and caused significant damage to areas that had already been affected by Hurricane Helene only two weeks earlier. This was but the sixth time in human history that more than one Category 5 hurricane occurred in a single season, the other times being in 1961, 2005, 2007, 2017 and 2019.¹⁷ Meteorologists had forecast that the 2024 Atlantic hurricane season would be particularly intense due to exceptionally high ocean surface temperatures.¹⁸ Rapid attribution studies by climate scientists have shown that "climate change is enhancing conditions conducive to the most powerful hurricanes like Helene, with more intense rainfall totals and wind speeds. This is in line with other scientific findings that Atlantic tropical cyclones are becoming wetter under climate change and undergoing more rapid intensification".¹⁹

^{iv} A major hurricane is defined as a Category 3 or higher, as measured on the Saffir-Simpson hurricane wind scale.



Significant flooding, rainfall and storm events took place in numerous parts of the world in 2023/24, including Cape Town.

Spain also saw extreme rainfall in 2024, with approximately a year's worth of rain falling in just eight hours in the Valencia region on 29 October. At least 220 people were killed, and roads, bridges and buildings were severely damaged or destroyed. Almost half of the people who died in the floods were older than 70,²⁰ highlighting elderly people's vulnerability to climate change impacts. Citrus farming – a key economic sector in Spain – was severely affected, as farmland responsible for up to two thirds of Spain's citrus production was inundated by flood waters. The Spanish Prime Minister ordered the largest peace-time deployment of the military to assist with flood recovery operations, with 10 000 troops being deployed to the region. As of November 2024, clean-up operations were still under way.

Moreover, ongoing flooding severely affected Africa's Sahel region, which has increasingly experienced both flooding and heatwaves in recent years. By early October 2024, more than 6,6 million people in West and Central Africa had been affected by floods that started the month before, including 1,9 million people in Chad, 1,3 million in Niger, 1,2 million in Nigeria, and 1,1 million in the Democratic Republic of the Congo. Over 979 000 people had been internally displaced due to flooding in eleven countries, notably Nigeria, Cameroon, the Democratic Republic of the Congo, Liberia, Mali, the Central African Republic, Cameroon and Mali, and at least 1 400 people had died.²¹ According to the WWA, the severity of the impacts experienced in the region was primarily due to extremely high levels of vulnerability. Since climate change means that events such as these are expected to become even more frequent and intense, this creates an even higher level of risk.²²

HEAVIER-THAN-AVERAGE RAINFALL, SEVERE FLOODING AND EXTREME WIND EVENTS IN CAPE TOWN AND THE WESTERN CAPE

Researchers²³ described the Western Cape's 2024 winter as "extreme and remarkable", and "nearly as extreme a climate event as the severe drought that struck the region between 2015 and 2018". The season brought heavy rainstorms, disruptive snowfall, extreme wind and low temperatures through cold fronts and cut-off lows. July specifically saw a series of back-to-back cold fronts with record-breaking rainfall. The resultant flooding burst riverbanks, damaged infrastructure and displaced hundreds of people across the province.

According to data from the South African Weather Service (SAWS), the Oranjezicht weather station in Cape Town measured 317,6 mm of rain for July 2024 compared to the 81,8 mm recorded for July 2023. This exceeds the long-term July average of 128 mm and is the highest monthly rainfall recorded for July since 1960. Additionally, the weather station located at the Cape Town International Airport recorded the highest monthly rainfall total since 1956, while the Newlands and Kirstenbosch National Botanical Gardens weather stations recorded over 500 mm of rain, making it the wettest month on record for these stations since 1999.

As indicated in table 1, July rainfall records for various stations across the Western Cape were above average, with some surpassing long-term records. Rainfall recorded at stations located across the Cape Winelands region broke several long-term monthly records, including at Paarl (455,6 mm), Worcester (209,2 mm) and Jonkershoek (418 mm). While on 1 July, total dam storage of the Western Cape water supply system still stood at 68%, this quickly climbed to over 99% by the end of that month.

Table 1: Total rainfall received for July 2024 as per the automatic weather stations monitored by the South African Weather Service's Cape Town office²⁵

Location	July 2024 rain (mm)	Location	July 2024 rain (mm)
Cape Columbine (near Paternoster)	96,8	Cape Town city	317,6
Paarl	455,6	South African Astronomical Observatory	316,8
Langebaanweg	96,6	Worcester	209,2
Malmesbury	201,6	Jonkershoek	418
Langgewens	227,8	Slangkop/Kommetjie	259
Porterville	130	Cape Point	89
Robertson	79	Hermanus	144,8
Excelsior	261,2	Grootbakenskap, Overberg	147,8
Atlantis	191,2	Cape Agulhas	100,4
Wellington	280,6	Struisbaai	151,2
Geelbek (West Coast)	158,8	Tygerhoek/Riviersonderend	120,8
Robben Island	233,2	Grabouw	468,6
Cape Town harbour	215,6		

From 6 to 9 April 2024, an intense storm with heavy rainfall and extreme winds affected areas across the Western Cape. On 7 April, wind gusts of up to 135 km/h were recorded across Cape Town and parts of the Cape Winelands region, contributing to widespread wildfires and informal settlement fires, and causing severe damage to homes, buildings and infrastructure. The storm was a result of a cut-off low weather system, which tend to occur with southeasterly winds around Cape Town during spring and autumn.²⁶ In July 2024, strong wind events occurred in Mitchells Plain and Wynberg. Wind gusts of more than 100 km/h were experienced, and SAWS increased warnings for damaging winds from level 6 to level 8 for the Cape metro. While the high wind speeds lasted for only 30 minutes in Wynberg, several roofs were blown off formal houses, informal structures and backyard dwellings, electricity poles were blown over, and other infrastructure and property-related damage was widespread. These strong winds were associated with storms from multiple cold fronts hitting the Western Cape during the 2024 winter.

During the previous winter period, too, a number of significant weather events occurred. In August 2023, the SAWS²⁷ confirmed the occurrence of landspouts^v over areas along Cape farms and Hanover Park, causing devastating destruction for the communities in these areas. Spring of 2023 also experienced a rocky start, as extreme weather events continued to affect parts of Cape Town and the rest of the province.²⁸ Areas along the city's coastline were affected by the spring high tide in September 2023, with severe damage reported along the shores of Gordon's Bay and Kalk Bay, and wave heights reaching up to nine metres along the Garden Route. The combination of strong waves and wind in Gordon's Bay damaged homes and coastal infrastructure, and seawater inundated roads, washed into buildings, and either swept away or completely submerged parked cars.²⁹ Extreme weather over the Heritage Day weekend in September 2023 resulted in significant damage and displacement due to flooding. The Helderberg area was badly affected, and in Sir Lowry's Pass Village in particular, severe mudslides³⁰ caused several communities to be cut off from main and access roads. Houses were swept away and mud flowed through several homes, reaching roof height in the Uitkyk informal settlement. Evacuations were performed across the area, and emergency responders helped members of the community escape their homes through windows or guide ropes.³¹

^v A landspout is a wind phenomenon that rotates, is fast-moving and damaging, but much weaker and smaller in scale than a tornado, and forms from the ground up.



In July 2024, strong wind events occurred in Mitchells Plain and Wynberg, causing several roofs to be blown off, electricity poles blown over, and other infrastructure and property-related damage.



PROGRESS AGAINST THE GOALS AND ACTIONS OF THE CLIMATE CHANGE STRATEGY AND ACTION PLAN

OVERVIEW OF INDICATOR FRAMEWORK

A set of indicators has been developed to monitor and evaluate the City's progress towards achieving the medium to longer-term goals of the Climate Change Strategy and Action Plan. These indicators are intended to measure longitudinal changes and trends from the baseline, and to observe both quantitative and qualitative medium-term outputs and outcomes.

The indicators are also designed to be 'SMART', i.e. specific, measurable, achievable, reliable and time-bound. As a result, some of the indicators included in this report have been selected based on their fulfilment of the SMART criteria due to factors such as data availability and the relevant department's ability to report accordingly. In future years, additional indicators may be included that provide a more comprehensive assessment of outcomes as improved data sources become available.

The indicator framework for the CCAP was established through an extensive internal departmental engagement process and includes a comprehensive set of 49 progress indicators across 37 goals. The 49 indicators comprise 23 new CCAP indicators, and 26 that are aligned with existing reporting processes and requirements. The indicators fall into the following categories:

- ✓ Service Delivery Budget Implementation Plan (SDBIP) indicators: Performance-based indicators and targets that City departments monitor and report on quarterly or annually
- ✓ Circular 88 indicators: Indicators that the City is required to monitor and report on to National Treasury
- ✓ New CCAP indicators: Indicators that have been drafted for the purpose of tracking goals across the Strategic Focus Areas and Cross-cutting Work Areas of the Climate Change Strategy and Action Plan

In some cases, targets for indicators have been set as part of a directorate or departmental business plan/ SDBIP process. These have been included in this report where they are available. Baseline data has been included where available. However, for new CCAP indicators that were developed for the previous report, as well as for new 2021/22 SDBIP indicators, 2021/22 was the first year of reporting, making it the baseline year.

A separate indicator framework was not developed for the 101 actions of the CCAP. Reporting on progress towards these actions takes the form of updates to the status of the action, as well as more detailed descriptive progress updates that provide a summary of the work that took place during the reporting year.

SUMMARY OF PROGRESS TOWARDS CLIMATE CHANGE STRATEGY AND ACTION PLAN GOALS IN 2023/24

As noted above, 49 progress indicators have been developed to track medium-term progress against the 37 goals of the Climate Change Strategy and Action Plan. As this is only the third year of reporting, it is sometimes difficult to determine trends in the indicators, as progress is expected to occur over the medium term, and year-to-year changes may not always be evident.

Nevertheless, the following trends have been determined:

Progress indicator trend	Number of indicators 2022/23	Number of indicators 2023/24
No change	20	16
Improved	17	20
Declined	5	6
Qualitative indicator	7	6
Data quality challenge	0	1

Note that where an indicator is linked to a target, if a target has been met or exceeded in both 2022/23 and 2023/24, this is captured as “No change” in this report – even if the actual figures differ – as this indicates a stable target achievement trend. It is important to note that “No change” is not a negative assessment. During previous reporting years, many indicators showed good results, and as such, “No change” indicates continued good performance. It is also important to note that some indicators are qualitative, making it impossible to determine a clear trend.

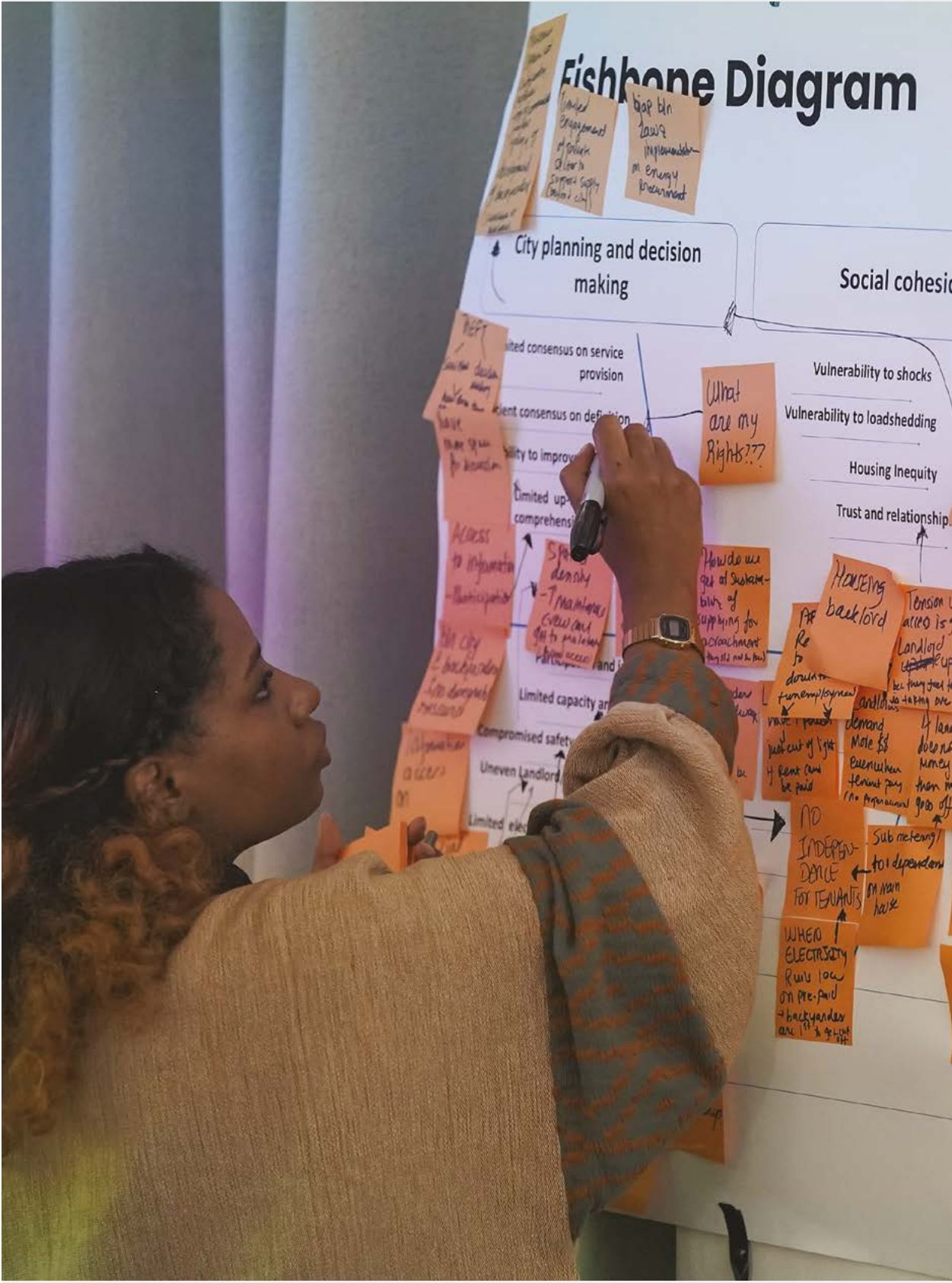
During 2023/24, there continued to be generally good performance in terms of the 49 indicators. Since the previous round of reporting, 16 showed no change, while 20 showed an improvement. A small number of indicators showed a decline, and one indicator could not be fully assessed due to data quality challenges. However, as noted above, three years are not long enough for significant trends to emerge. For most of these indicators, a longer time period is needed to determine long-term trends, rather than mere year-to-year fluctuations.

In compiling this year’s report, it also became evident that the indicator set is in need of review and refinement, both to account for changes in the approach to certain actions over time, and to improve the accuracy and reliability of reporting. This is particularly important for indicators that are subject to fluctuations due to external factors beyond the City’s control, such as weather conditions, or where the City has a limited mandate to act. Some indicator targets, especially those used in SDBIP reporting, also need to be adjusted to align with how the indicators are reflected in the relevant directorate’s most current SDBIP. A review of the indicator set will take place at the same time as the evaluation of the CCAP, which is scheduled to be completed within five years of the approval of the Action Plan. The work will take place in the course of 2025/26 at the latest, but may be concluded sooner if feasible.

SUMMARY OF PROGRESS TOWARDS CLIMATE CHANGE ACTION PLAN ACTIONS DURING 2023/24

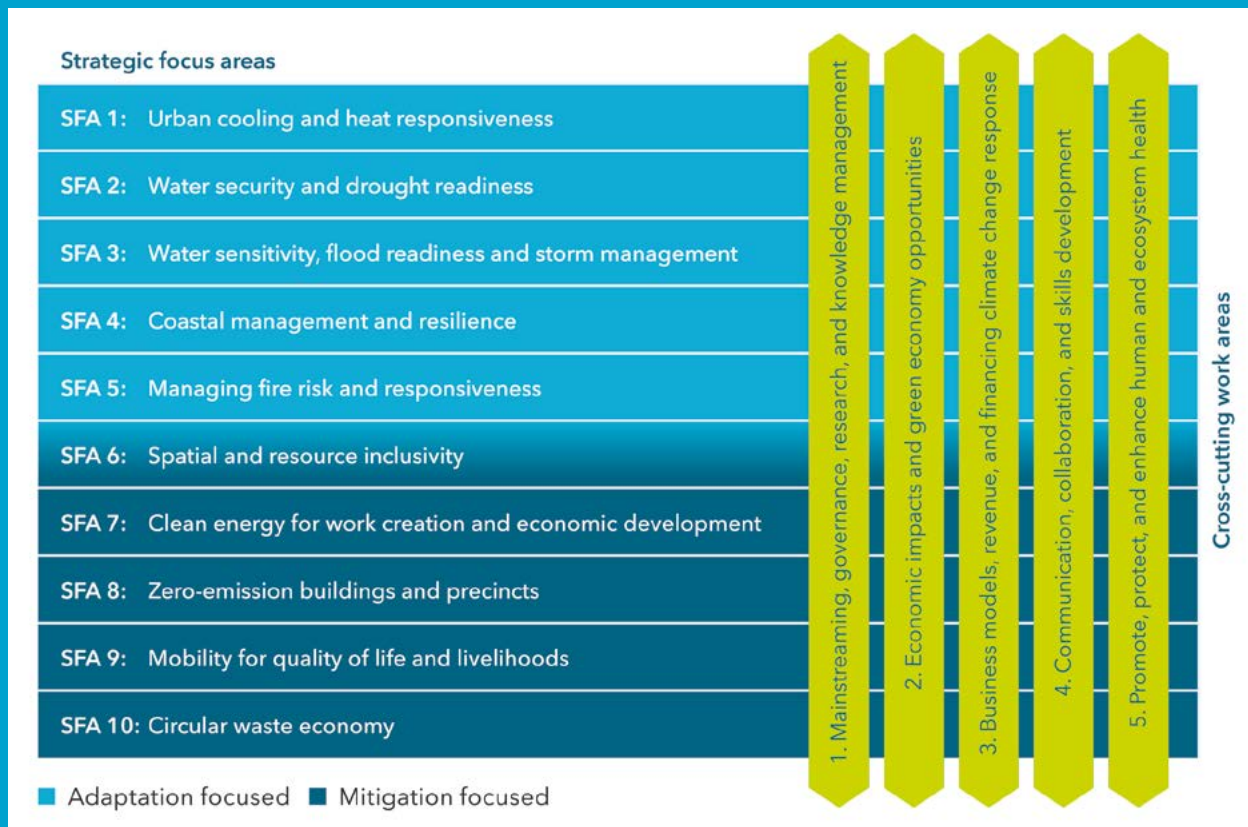
The CCAP consists of 101 programme-level actions across ten Strategic Focus Areas and five Cross-cutting Work Areas. The following table indicates the trend in the status of these actions since they were approved in August 2021.

Action status	Number of actions in approved CCAP (August 2021)	Number of actions as of 30 June 2022	Number of actions as of 30 June 2023	Number of actions as of 30 June 2024
New (concept)	19	7	6	5
New (in planning)	23	14	13	13
Expansion of existing programme	27	23	22	19
Implementation	32	50	54	58
Completed	0	2	2	2
On hold	0	4	3	3
Cancelled	0	1	1	1



IMPLEMENTATION PER STRATEGIC FOCUS AREA AND CROSS-CUTTING WORK AREA

This section of the report details implementation per Strategic Focus Area (SFA) and Cross-cutting Work Area (CCWA), each time providing an overview of key progress at the action level in 2023/24 as well as progress against the goals set to measure medium-term outcomes.



STRATEGIC FOCUS AREA 1: URBAN COOLING AND HEAT RESPONSIVENESS

OVERVIEW

Cities globally are prioritising putting in place heat response plans to prepare for and manage heat-related risks to public health and safety, infrastructure, critical operations, and service delivery. Implementing initiatives aimed at urban cooling and heat responsiveness is becoming essential to ensure business continuity, sustain effective service delivery, and reduce risks to public health and wellbeing.

Reporting on this SFA covers two goals:

- ✓ **Goal 1:** Reduce immediate risks to health during heatwaves and high-heat days
- ✓ **Goal 2:** Proactively reduce heat impacts on the city through urban greening

Progress in 2023/24

Work areas contributing to urban cooling and heat response in the city continued to advance in 2023/24. The City of Cape Town High-Heat Day and Heatwave Action Plan was finalised and approved by the City Manager in November 2023. It comprises 13 actions and three main components, namely heat readiness, heat response, and research and knowledge management.

Several actions were completed or made significant progress in the reporting year, including:

- ✓ the approval of a Workplace Heat Stress Risk Assessment and a Heat Stress Workplace Management Guideline as part of the City's occupational health and safety work;
- ✓ the roll-out of an extreme heat summer campaign for City staff;
- ✓ the development of a sector-based heat risk assessment template that was piloted with two departments; and
- ✓ a heat risk review of the City's Festive Season Readiness Plan 2023/24.



The reporting year also saw the initiation of partnerships and the development of two data projects focused on heat-related tools and platforms. A community heat mapping project was led and implemented by the World Bank's City Resilience Programme in partnership with National Treasury's Cities Support Programme. Using vehicle-based sensors, the project mapped temperatures across a 200 km radius in the metro to help inform the design of effective heat mitigation actions, including being able to identify areas in need of tree-planting and urban greening. Additionally, in partnership with C40, the World Resource Institute Ross Centre for Sustainable Cities is developing a heat planning data tool, using central Cape Town as a case study. The main goal of this project is to improve understanding of the spatial components of heat in Cape Town, and to understand and depict the impact of shading (trees and buildings) and impermeable surfaces on heat comfort levels. Through this data, the City will gain an improved understanding of specific areas in need of trees and greening.

The Urban Forest Policy continued to be implemented in the reporting year, and the Recreation and Parks Department added additional considerations for tree-planting decision-making to ensure species diversity. These include avoiding the planting of single-species rows and avenues, and – based on learnings from the City's experience with the polyphagous shot-hole borer (PSHB) – planting a mixture of indigenous and exotic species to improve survival rates and increase biodiversity.

The City exceeded its tree-planting target of 2 000 trees, with 2 204 trees being planted in the reporting year. This number includes trees that provide instant shade, with 180 trees of 500–1 000 litres in size, and 179 trees of 250–500 litres. Additionally, 2 924 eight-litre-bag-sized plants were planted in various areas of the city. While these plants do not provide shade, they contribute to a natural cooling effect in the area as soon as they are planted, and help reduce the urban heat island effect.

Recreation and Parks also facilitated 'tree think tanks' for each of their four management areas in the city. These workshops covered the five themes of growing the urban forest through new planting, preserving the city's existing trees, managing and maintaining the urban forest to ensure sustainability, stakeholder



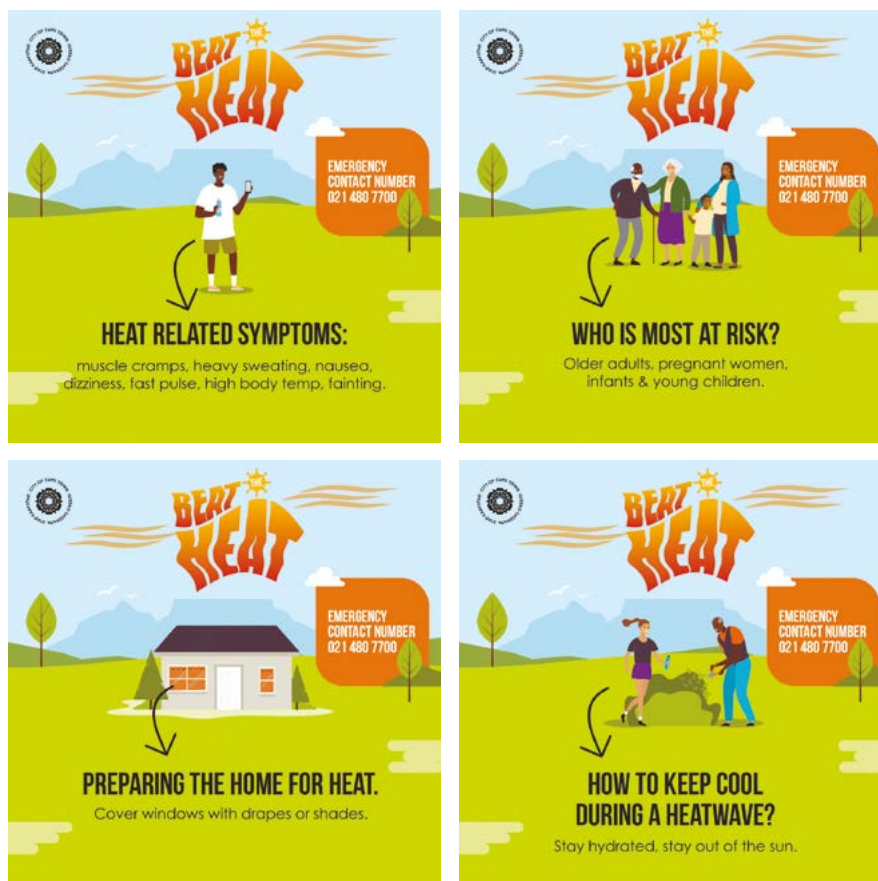
2 204 trees were planted during the reporting year.

engagement and awareness campaigns, and tree monitoring and evaluation. The purpose of the workshops was to identify areas where trees could be planted sustainably, identify what is required to ensure that trees are maintained, and to discuss topics such as tree work procedures, record-keeping, the PSHB, and the resources required to maintain trees.

The third publication in the Green Infrastructure Programme (GIP) series of best-practice guidelines, “Urban green”, is in the final stages of development and planned to be published in the last quarter of 2024. The guideline will cover several related topics, including:

- ✓ protecting and enhancing an interconnected network of green assets;
- ✓ protecting and restoring Cape Town’s biodiversity network;
- ✓ protecting appropriate existing trees and planting appropriate new trees to maintain and enhance the urban forest;
- ✓ establishing, enhancing and retaining greenery in your neighbourhood;
- ✓ considering establishing a green roof or roof garden;
- ✓ considering establishing a green wall or vertical garden; and
- ✓ “rewilding” your garden and supporting urban nature.

The City’s Green Infrastructure Network (GINet) continued to inform planning towards urban greening. It has been embedded in the Metropolitan Spatial Development Framework (MSDF) as well as the district spatial development frameworks and environmental management frameworks (DSDFs/EMFs), and also constitutes a spatial layer on the City’s CityMap Viewer.



PROGRESS INDICATORS

GOAL 1: Reduce immediate risks to health during heatwaves and high heat days				
Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Reduced risks to health during heatwave and high heat days	Number of real-time heat-monitoring network sensors operating	0	0	0
	Date of approval of most recent Heatwave and High Heat Action Plan	New indicator	Action Plan was drafted as of 30 June 2022, but not yet approved	Action Plan was approved by the City Manager on 13 November 2023

GOAL 2: Proactively reduce heat impacts on the city through urban greening					
Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
Reduced heat impacts on the city through urban greening	Number of trees planted in line with Urban Forestry Plan	2 414 (2020/21)	2 000 (2023/24)	2 582	2 334



Tree planting in Joe Slovo (high heat risk area) as part of the Beat the Heat Elderly Programme.

STRATEGIC FOCUS AREA 2: WATER SECURITY AND DROUGHT READINESS

OVERVIEW

Drought remains a significant risk for Cape Town, even though the past two years have seen significant rainfall, as climate change projections continue to show strong indications of a hotter and drier future. Consequently, drought readiness programmes are a key pillar of the City's long-term climate change response work, and continue to account for the majority of the City's capital budget spending on climate resilience.

Reporting on this SFA covers two goals:

- ✓ **Goal 3:** Reduce demand for water to protect water resources and ensure sustainability of supply
- ✓ **Goal 4:** Work to augment and increase water supplies to achieve 99,5% assurance of supply

Progress in 2023/24

Implementation of the City's water demand management programmes continued during the year in review. Water demand management measures have been in place in Cape Town since the early 2000s, and significant gains in the implementation of water demand management infrastructure and technology were made during the 2015–2018 drought period.

Pressure management and zone metering remains one of the City's most effective tools to manage water demand effectively. This allows the administration to supply water at a pressure that minimises leaks, lower water pressure during drought periods so as to reduce overall demand, and monitor zones to detect unusually excessive consumption that may indicate major leaks or pipe bursts. These zones include district metered areas, where the City can monitor the zone for excessive consumption or leaks, and pressure management zones, where the City can both conduct monitoring and control pressure. In 2023/24, an additional 13 zones were constructed, and another 11 were designed. As of 2023/24, zone coverage is at approximately 74%.

Maintenance of water infrastructure is another key part of the water demand management programme to prevent water loss due to damaged infrastructure. In 2023/24, 5 551 km of the water distribution network was surveyed for leaks by visual means and listening sticks, and four zones were monitored for non-visual leaks detection, resulting in a saving of approximately 4,28 megalitres per day (ML/d). In addition, the treated-effluent reuse programme continued to be implemented, with 6,1% of treated effluent being reused in the 2023/24 financial year, equating to an average daily volume of 47,5 ML/d.

In the year in review, 238 Expanded Public Works Programme (EPWP) job opportunities were also created in the field of water demand management education and communication. Awareness-raising efforts were carried out across the city: information was distributed to 187 931 households, and 139 schools were also reached.

Moreover, work continued on the implementation of the City's New Water Programme. The programme includes a number of different interventions aimed at increasing water resilience, including desalination, groundwater use and recharge, water reuse, and invasive species management. A number of significant projects moved forward in both the planning and implementation aspects of this programme. Work areas that are in an advanced planning stage include desalination, water reuse, and surface water augmentation. The City has made progress with the process of entering into a water supply agreement with the national

Department of Water and Sanitation (DWS) for the Berg River to Voëlvlei augmentation scheme, with a revised delivery date of June 2027. The City and DWS are also working together to intensify and align future planned surface water schemes through the various Reconciliation Strategy Platforms. This process requires further discussion in order to clarify uncertainty and revisit the proposed scheme unit reference values and environmental acceptability. To support the desalination programme, the Water Research Commission was appointed in 2021/22 to facilitate and manage an expert independent advisory panel to review all feasibility reports and to make recommendations, which continued in 2022/23 and 2023/24. In 2022/23, the Government Technical Advisory Centre appointed a transaction advisor to help evaluate the feasibility reports and advise on the most effective and efficient project procurement and delivery method; this process continued in 2023/24.

The transaction advisor considered the viability of the proposed site and reviewed the various mechanisms that could be used to implement the desalination plant. The City's capacity to implement and operate the plant was also assessed in terms of section 78(1) of the Municipal Systems Act. The findings of the assessment were shared with Council in March 2024, and Council granted approval to proceed with a detailed feasibility study of alternative options for the implementation and operation of the City's first permanent desalination plant. This detailed feasibility study of the alternative options, including public-private partnerships, continued during the reporting year and includes a financial assessment of the different implementation mechanisms.

Work to further develop water reuse projects also continued in 2023/24. A rigorous design review process was undertaken by the City, involving an independent advisory panel (IAP) and internal workshops. The IAP conducted a dedicated five-day workshop in December 2023 to comprehensively review the design, water safety planning, catchment control strategies as well as monitoring protocols of the Faure New Water Scheme (FNWS). Various mechanisms for implementation of the FNWS were also investigated, including both ownership and operation of the facility by the City, seeking external financing, as well as a public-private partnership. A citywide water reuse study was also initiated in February 2022 and completed in June 2024; this study will investigate reuse options beyond 2035 for the adaptable New Water Programme schemes.

The development of groundwater infrastructure continued in 2023/24 with the drilling of several more production boreholes at the Table Mountain Group aquifer (TMGA), Cape Flats aquifer (CFA) and Atlantis aquifer. The equipping of one borehole also commenced. At the CFA, the 6 ML/d Strandfontein West water treatment plant reached the commissioning stage, with performance testing of key equipment and control systems at an advanced stage. At the Atlantis aquifer, construction works to improve the functioning of aquifer recharge basins were under way at the time of reporting; these will help improve the recharge water quality and maximise scheme yield. The City's significant investment in groundwater schemes, and the potential impacts associated with proposed developments in Cape Town, have necessitated a review of the regulatory framework for groundwater management in the local government context. The City has embarked on a process to determine the best approach for groundwater management on a local scale. This process will help define a consolidated approach to groundwater usage and management that incorporates legislation such as the National Water Act, the Water Services Act and other existing laws.

Finally, invasive species clearing in key catchment areas and aquifer recharge areas is a key tool for increasing water supply by reducing the amount of water lost to water-intensive invasive tree species. Between April 2019 and June 2024, 49 828 hectares (ha) were cleared in priority sub-catchments of the Theewaterskloof, Berg River and Wemmershoek dams, comprising 30 275 ha of new initial clearing and 19 553 ha of follow-up. Additionally, 6 742 ha were cleared in the Steenbras catchment, comprising 3 560 ha of initial clearing and 3 182 ha of follow-up. The 4 998 ha cleared in the Atlantis aquifer area, in turn, consisted of 1 987 ha of initial clearing and 3 011 ha of follow-up. For 2023/24, clearing of a total of 7 879,5 ha was achieved as part of the memorandum of agreement with The Nature Conservancy, achieving 97,4% of the target hectares for the funding made available by the City.



The City has made progress with the process of entering into a water supply agreement with the national Department of Water and Sanitation (DWS) for the Berg River to Voëlklei augmentation scheme.

PROGRESS INDICATORS

GOAL 3: Reduce demand for water to protect water resources and ensure sustainability of supply

Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
Reduced water demand	Total per capita consumption of water (litres per capita per day)	136,2 litres per capita daily (June 2020)	190 litres per capita daily	160,5 litres per capita daily	157,6 litres per capita daily

GOAL 4: Work to augment and increase water supplies to achieve 99,5% assurance of supply

Medium-term outcome	Indicator name	Target	Update as of 30 June 2023	Update as of 30 June 2024
Increased water supply to achieve target of 99,5% assurance of supply	Total augmented water capacity in ML/d	20 ML/d (2022/23)	A total of 23,923 ML/d has been achieved by end of 2022/23 quarter 4. - The maximum yield of the Table Mountain Group aquifer is 18,4 ML/d, with sustainable yield at 15 ML/d. - Invasive species clearing has added 5,52 ML/d to the supply system.	A total of 42,83 ML/d has been achieved by end of 2023/24 quarter 4. - TMGA yield is 18,4 ML/d - CFA yield is 5,41 ML/d - Atlantis aquifer yield is 7,10 ML/d 10,19 ML/d added to supply system by invasive species clearing (2021/22 to 2023/24)



Invasive species clearing in key catchment and aquifer recharge areas in Cape Town is ongoing.

STRATEGIC FOCUS AREA 3: WATER SENSITIVITY, FLOOD READINESS AND STORM MANAGEMENT

OVERVIEW

Although Cape Town is projected to experience a hotter and drier future, flooding will remain a risk, particularly during intense rain events, which are projected to continue to occur into the future and possibly increase in intensity over time. Therefore, programmes that address flood risk will continue to be implemented alongside drought readiness programmes, with a particular focus on improving catchment management through green and hybrid infrastructure solutions that also support a water-sensitive city approach.

In 2023/24, Cape Town again saw above-average rainfall. However, heavy rainfall mostly occurred in the normal winter period and was driven by cold fronts, in contrast to the unusually heavy rainfall in spring and autumn of 2022/23, which was largely driven by cut-off lows. The past season's rainfall again highlights the significant variability of Cape Town's climate and emphasises the need for flood risk management and planning to take place alongside water-resilience planning.

Reporting on this SFA covers two goals:

- ✓ **Goal 5:** Proactively reduce flood risk through the implementation of a water-sensitive city strategy or plan
- ✓ **Goal 6:** Take action to reduce flood risk and storm damage through disaster mitigation approaches

PROGRESS IN 2023/24

This work area continued to achieve progress, particularly regarding the Liveable Urban Waterways (LUW) programme. LUW aims to restore and rehabilitate Cape Town's waterways, with a focus on transforming poor-quality waterways into dignified open recreational spaces for local communities, while also restoring ecological functions and reducing flood risk.

In 2023/24, the detailed design phase for the five LUW projects in the Sand River catchment was completed, including ongoing stakeholder engagement, and the Vygekraal River corridor upgrade project commenced with concept design. The Elsieskraal River corridor project was added to the LUW portfolio in early 2024 and is in the concept design phase.

Unfortunately, in early 2024, capital budget reprioritisation resulted in four of the LUW projects having their budgets deferred to 2033/34. This has created a significant risk for the success of the LUW programme and has eroded the trust that had been built in recent years with the affected communities through collaborative project development.

The C40 Cities Finance Facility (CFF) technical assistance (for the project on green infrastructure options for improved waterway and catchment management) continued in 2023/24. Various specialist studies culminated in two master plans for waterway rehabilitation and green infrastructure in the Zeekoe and Diep/Sand River catchments. The project development process included six stakeholder workshops. A cost benefit study commenced and will feed into the LUW Programme Financing and Implementation Framework, which is to be completed in 2024/25. Work to identify a longer-term project portfolio also continued. To date, 44 LUW projects have been identified, mostly to scoping stage, across 11 catchments. Depending on budget availability in 2024/25, work will commence on concept designs and feasibility studies.



The C40 CFF technical assistance has also provided the City with training and capacity development, including the development of guidelines for catchment management forums, the establishment of the Zeekoe Catchment Management Forum, as well as training on nature-based infrastructure for 40 City officials.

Implementation of water-sensitive urban design remains a priority in terms of the Cape Town Water Strategy. The City is aiming to secure support in the form of technical assistance from key international partners to develop a water-sensitive city plan, and submitted a grant application in this regard in 2023/24. If the grant application succeeds, it is anticipated that work will commence either in the latter half of 2024/25 or in 2025/26.

Progress with stormwater master planning, which is a key component of flood risk reduction, included the initiation of a master planning process for the Hout Bay river catchment. Moreover, technical assistance to the value of R5 million has been secured from the World Bank and will be allocated to stormwater master planning for either the Zeekoe or Sand River catchments (still to be determined). A list of priority catchments has been identified and is currently being revised in terms of budget requirements. The master plans for the Silvermine River and Muizenberg catchments should also be completed by the end of 2025/26.

The ongoing implementation of the City's Winter Readiness Programme in the reporting year was a key response measure to address the numerous extreme weather events that affected Cape Town in the 2023 and 2024 winter months. Disaster coordination team activations were extended due to the extent of severe flooding, which resulted in damage to property, infrastructure and homes (including thousands of informal structures), electricity outages, and the displacement of thousands of residents.

The Winter Readiness Task Team planned and implemented proactive disaster mitigation and response work. This included conducting rapid risk assessments on 42 high-risk areas prone to water table rise, stormwater overflows and river/flash floods. The City also recently acquired an intelligence, surveillance and reconnaissance (ISR) aircraft, which played a central role in performing rapid impact assessments of affected areas.

Other activities to reduce flooding in high-risk areas included the cleaning and unblocking of stormwater infrastructure and canals, repairs to damaged stormwater infrastructure, as well as pumping and diverting stormwater runoff away from settlements. In addition, over 25 000 flood kits were distributed, the provision of humanitarian relief to more than 20 000 people was coordinated, and the Community Services and Health Directorate provided emergency shelter to 100 families in Nomzamo, Strand. Following flood damage to road infrastructure across town, the City's Disaster Risk Management Centre and Province's Disaster Management Centre jointly coordinated a financial assessment of the damaged infrastructure to apply for funding through Province to effect repairs.

PROGRESS INDICATORS

GOAL 5: Proactively reduce flood risk through the implementation of a water-sensitive city strategy or plan				
Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Reduced flood risk through implementation of flood alleviation projects identified by catchment, storm water and river management plans	Number of catchment forums established	0 (2021/22)	Five forums are currently in place. During the 2022/23 FY, four forums were established: Wildevölvlei, Sand River and Lourens River, and the Diep River Estuary Management Forum. Three forums will be established during 2023/24, including the Diep River and Zeekoe Catchment.	Eight forums are currently in place. Three additional forums were established in 23/24 - Diep River, Zeekoe, and Soet River catchments.
	Length of waterways rehabilitated or restored in the previous financial year	380 m (2021/22)	1 180 m completed	5 970 m completed

GOAL 6: Take action to reduce flood risk and storm damage through disaster mitigation approaches				
Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Reduced flood and storm damage through disaster mitigation approaches	Number of formal and informal structures affected by flooding in the previous financial year*	14 931 (2021/22)	10 668	16 000

* This number is affected by the intensity and frequency of severe weather events and may vary greatly from year to year.



Various specialist studies related to the City's Liveable Urban Waterways (LUW) programme are ongoing.

STRATEGIC FOCUS AREA 4: COASTAL MANAGEMENT AND RESILIENCE

OVERVIEW

Cape Town's coastline is a valuable asset to the city's economy, tourism and recreation. Yet the impact of climate-change-induced pressures (such as sea-level rise, storm surges and coastal erosion) combined with human-induced pressures (such as urban development close to the coastline) has already started to compromise the natural dynamic functions and state of the coast and its ecosystems.

Reporting on this SFA covers two goals:

- ✓ **Goal 7:** Promote coastal resilience for the benefit of both coastal communities and coastal ecosystems
- ✓ **Goal 8:** Put in place effective cooperative and empowering mechanisms for addressing complex coastal management issues in the context of climate change

Progress in 2023/24

In 2023/24, the City continued to implement and enforce its regulatory framework, which comprises the Coastal By-law, the coastal management line and the coastal edge. This framework ensures that the City can regulate and enforce measures to address issues such as encroachments and unauthorised sea defences along Cape Town's coast. At the same time, the framework guides and informs land use and development applications. In the past year, the City applied the Coastal By-law to ten abutting properties exposed to coastal hazards in the Gordon's Bay area. This was done to address both property owners' exposure to coastal hazards and limit the public risk posed by unlawful encroachments on the beach that were affecting public space.

The Coastal Management Branch also finalised a coastal risk and vulnerability study. The study identified the top three vulnerable areas (ablutions; parking areas; coastal walkways) and hazards (sea-level rise; infrastructure location, age and condition; coastal erosion) for each of the coastal nodes included in the assessment. It also revealed the cumulative impact of hazardous events, considering all identified coastal nodes that contribute to and define a high-quality coastal environment. These results are now being integrated into decision-making and planning.

Additionally, a coastal adaptation planning study of False Bay is currently under way. The project, funded by the French Development Bank, focuses on coastal erosion and the development of coastal flooding hazard lines for current and future time horizons and key storm return periods. A further focus is to identify potential physical impacts on, and the required management interventions for, areas earmarked for coastal development nodes. Initiatives such as these ensure that the City can base its decisions on the very latest and the best available scientific evidence.

Coastal repairs, maintenance and upgrades continue to be planned and implemented across various locations along Cape Town's coastline. These include maintenance work on a section of the Sea Point seawall (including repairs to the deteriorating wall face), repairs and maintenance in Table View, and an upgrade of coastal infrastructure in Small Bay, Blouberg. Work on the upgrade of coastal infrastructure, including the construction of a seawall for Small Bay, made good progress in 2023/24.

Dune rehabilitation in Table View commenced back in July 2022 as part of a larger project to rehabilitate, revitalise and maintain the Table View beachfront, with the entire project anticipated to be completed by June 2025. Planting of vegetation on the dunes continued in 2023/24; the new plants will take several years to fully

establish. Construction of the walkway along the coast, reconfiguration of the parking areas, new ablution facilities and the repair and replacement of ageing stormwater infrastructure commenced in January 2024.

National Treasury's Cities Support Programme, in partnership with the Council for Scientific and Industrial Research (CSIR), offered support to metropolitan municipalities to integrate climate-responsiveness and resilience into their planning, budgeting and reporting. As part of this process, the CSIR has compiled a discussion document for the City, including a review of currently available studies, data and resources to better understand and analyse coastal resilience. Additionally, the document outlines good principles for coastal resilience in terms of climate change mitigation and adaptation, offers technical information requirements and specifications, and recommends ways to refine current approaches and techniques to be more specific to the city context

PROGRESS INDICATORS

GOAL 7: Reduce demand for water to protect water resources and ensure sustainability of supply					
Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
Increased coastal resilience for the benefit of coastal communities and coastal ecosystems	Number of coastal notices issued per year in terms of City's Coastal By-law	3 (2021/22)	N/A	12	• 36 pre-directives served • 13 directives served • 12 directives complied with, and 24 in process
	Percentage of coastline with protection measures in place	6,20% (2021/22)	6,27%*	6,20%	6,27%

* The intention is not to exceed the target of 6,27%, as this would imply that more infrastructure is located in risk areas, requiring more protection, which would point to poor decision-making.

GOAL 8: Put in place effective cooperative and empowering mechanisms for addressing complex coastal management issues in the context of climate change				
Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Effective cooperative and empowering mechanisms are in place to address complex coastal management issues relating to climate change	Proportion of quarterly provincial coastal committee meetings attended (% of meetings held) per year	100%	100%	100%



Dune rehabilitation in Table View was under way during the reporting year.

STRATEGIC FOCUS AREA 5: MANAGING FIRE RISK AND RESPONSIVENESS

OVERVIEW

Fire poses a risk to both the natural environment and communities living at the urban-wildlife interface as well as in informal settlements. The increased hot, dry and windy conditions due to climate change – which are projected to increase further in both the medium and long term – raise the risk of intense wildfires. Although the link between informal settlement fires and climate factors is less clear, there is evidence that the strong winds prevalent in Cape Town's summer months could significantly exacerbate the spread of informal dwelling fires.

Reporting on this SFA covers one goal:

✓ **Goal 9:** Proactively reduce fire risk and the impact of fires on communities and natural areas

Progress in 2023/24

The 2023/24 fire season was Cape Town's busiest in the past four years, with the City's Fire and Rescue Service responding to 13 087 incidents between October 2023 and January 2024, including 7 190 vegetation fires. According to Disaster Risk Management officials and the SAWS, the intensity of these vegetation fires was driven by the dry conditions resulting from high temperatures, along with El Niño, extreme wind conditions, the presence of high fuel loads, and human negligence. Structural fires remained a high concern for the City. These can be attributed to increased load-shedding frequency and intensity (which causes residents to use less-safe energy sources), ongoing challenges with illegal electricity connections, and human error. The City continues to monitor fire statistics to better understand behaviour and the causes of incidents.

Various activities continued to be implemented to reduce the risk of urban fire and its impact on communities. These activities included ongoing public safety education programmes for businesses, religious institutions, informal settlements, schools and senior citizen care facilities by the Fire and Rescue Service's Fire Life Safety Section, in addition to the roll-out of a public information campaign on radio and in community newspapers. The Disaster Risk Management Centre also continued to implement the Fire Wise programme, which reached 110 schools and provided fire safety guidance and awareness to residents in 22 high-risk informal settlements.

The fire mitigation pilot project in the Overcome Heights informal settlement has proven to be a major success. The pilot aims to limit the spread of fire and minimise the risk of injury, death and damage to infrastructure, property and the environment by coating informal structures in a fire-retardant substance. While a fire did break out in the densely populated settlement, it was contained within the coated structure where it started, which prevented major losses to the broader community as well as damage to electrical, water and sanitation infrastructure.

In addition, the Fire and Rescue Service remained prepared for both urban and wildfires by maintaining predetermined response plans, conducting ongoing maintenance, and servicing fire hydrants. Work is expected to start on the City's 33rd fire station, located in Langa, and the Fire and Rescue Service's

operational fleet currently comprises more than 200 vehicles, including 71 fire appliances, 26 water tenders, four heavy technical rescue units, eight aerial appliances, and five watercraft. Another addition to the Service's capacity is a group of 26 learner firefighters who graduated from the Fire and Rescue Service Training Academy and have subsequently been deployed to various fire stations across town.

The Fire and Rescue Service also forms a key part of safety planning for the festive season, which requires increased preparedness and defences. Resources utilised and programmes implemented for the 2023/24 festive season period include aerial support, seasonal resources and firefighters, ongoing planning and partnerships with agencies that specialise in fighting wildfires such as the Table Mountain national park and its affiliates. The Service also received assistance from the City's Disaster Risk Management volunteer corps and other line departments, the Volunteer Wildfire Services, and neighbouring municipalities (through mutual aid agreements).

Other measures implemented to manage and reduce the risk and impact of wildfires include planned ecological burns, alien-clearing activities after fires, and the maintenance of fire breaks. Eight successful ecological burns covering a total of 76,78 ha were conducted between February and April 2024 at Witzands Aquifer Nature Reserve, Blaauwberg Nature Reserve, Bothasig Fynbos Nature Reserve, the Milnerton Racecourse section of Table Bay Nature Reserve, and False Bay Nature Reserve. The budget requirements to sustain wildfire management activities are substantial, and therefore, budget unavailability threatens the continuity of the full range of activities for effective protection.

Finally, a survey to investigate community perceptions of alternative energy and current energy use has been completed and will inform the implementation of affordable and safe energy solutions for low-income and informal households. Work on the free basic alternative electricity subsidy has been integrated into the implementation plan of the City's Energy Strategy. The City, working with GreenCape, facilitated a workshop with national government and various organisations focusing on climate finance to help identify potential funding streams for this subsidy. In addition, the City is partnering with the South African National Energy Development Institute (SANEDI) on implementing solar public lighting in the Marikana informal settlement in Philippi.

Awareness programmes with a focus on energy use in low-income and informal households also continued to be implemented in the reporting year. These included awareness sessions under the Let's ACT at Home and the Smart Living programmes. The Smart Living programme sessions reached 325 people and offered training in smart cooking, home safety and basic sustainability concepts relating to energy, water, waste and the environment. Audiences reached included schools, women, cooks at early childhood development centres, urban agriculture groups, food kitchens and new homeowners.

GOAL 9: Proactively reduce fire risk and the impact of fires on communities and natural areas

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Reduced fire risk and impact on communities and natural areas	Number of dwellings in informal settlements affected by structural fires annually	1 968 (2021/22)	6 324	6 388

STRATEGIC FOCUS AREA 6: SPATIAL PLANNING AND RESOURCE INCLUSIVITY

OVERVIEW

Spatial planning has been identified as a key mechanism for the implementation of both adaptation and mitigation programmes. A compact, efficient and accessible urban form supports reduced transport emissions and offers the opportunity to put in place measures to increase urban resilience, while promoting access to economic opportunities.

Reporting on this SFA covers two goals:

- ✓ **Goal 10:** Densify mass transit routes through mixed-use developments that support public transport and include social housing
- ✓ **Goal 11:** Ensure low-income residents are climate-resilient and have equitable access to essential services

Progress in 2023/24

Following the increased integration of climate change considerations into the revised Municipal Spatial Development Framework (MSDF) and District Spatial Development Frameworks (DSDFs) in 2022/23, implementation of these spatial planning tools, along with implementation monitoring, has been ongoing. Monitoring of MSDF and DSDF implementation is reflected in the annual online Spatial Trends Report, which is published on the City's planning portal^{vi} and released annually on World Town Planning Day (8 November).

The promulgation of the DSDFs as Environmental Management Framework (EMFs) was approved by Council, but is still awaiting promulgation under the National Environmental Management Act (NEMA) due to differences in legal views between Province's Department of Environmental Affairs and Development Planning and the national Department of Forestry, Fisheries and the Environment. This is also delaying the declaring and gazetting of the urban development edge as the "urban areas line" per the NEMA Environmental Impact Assessment Regulations. In addition, the process of reviewing the coastal edge continued in 2023/24; the results of this review will determine whether a revised coastal edge is required.

The investigation into the nature, scope, benefits and applicability of an incentive overlay zone (IOZ) initiated in 2022/23 was completed in the reporting year, and the results were advertised as part of the Municipal Planning By-law review. Public comments will be considered in 2024/25. The purpose of the IOZ is to pursue the desired built form articulated in the City's spatial frameworks by influencing the rate and location of development activity in development focus areas (DFAs). Additionally, the implementation of parking reduction ratios in areas well served by public transport continued. This process allows applicants to benefit from fast-tracked administrative processes for deviations from parking requirements, thereby supporting transit-oriented development. Heritage exemption areas were also approved in key DFAs to streamline building approval processes. These exemption areas allow property owners to undertake certain activities without requiring prior approval from Heritage Western Cape, and have been applied to areas that contain buildings that are older than 60 years, but have been assessed as not worthy of conservation.

^{vi} Available at [www.capetown.gov.za/Work and business/Planning-portal/spatial-analysis-and-research/Spatial-Trends-Report](http://www.capetown.gov.za/Work%20and%20business/Planning-portal/spatial-analysis-and-research/Spatial-Trends-Report).

The City's urban sustainability pilot project continued to move towards implementation in the form of the Potsdam Sustainability Campus. The vision is to create a City-owned 'living lab' for experimentation with a wide range of sustainable practices, materials and technologies to physically demonstrate the positive impact of innovative approaches coupled with integrated design thinking. In the past year, stakeholder engagement took place with key knowledge partners, supported by the City's collaborative relationship with ICLEI - Local Governments for Sustainability. The project attracted internal partnership support and secured the transfer of the City's net-zero carbon demonstration exhibit known as My Clean Green Home to the Sustainability Campus. This will serve as an initial site establishment tool to support programme implementation, bringing with it independent PV electricity supply. The project also attracted research and implementation support through partnerships with ICLEI, with national funding support from the Department of Science and Innovation.

In terms of the City's portfolio of catalytic precinct projects, the focus in 2023/24 was on land enablement, de-risking and project packaging of a number of land parcels in the City's key catalytic precincts. This will ensure that projects are ready for implementation either by the City, other public-sector partners or the private sector. These precincts, each at a different stage of progression, include central Bellville, the Foreshore Gateway precinct, the Philippi opportunity area, the Diep River station precinct, central Athlone, central Claremont, and the four sites involved in the C40 Reinventing Cities initiative.





The Marikana informal settlement, where an alternative public lighting solutions initiative will be piloted, with a focus on solar-powered lighting.

In the year in review, progress was also made with regard to inclusionary housing. The development of a policy on affordable housing – an amalgamation of the existing policy development processes regarding social housing and inclusionary housing – continued, with the goal of commencing public participation in 2024/25. The policy will outline enablers and incentives to ensure the delivery of affordable housing in targeted areas, and includes the release of City-owned land. The categories of affordable housing are social housing, gap housing, mixed-market models and inclusionary housing.

Additionally, key achievements in the Land Release for Affordable Housing include the release of land parcels at the Salt River Market site and Pickwick Street (Woodstock) for mixed-market development. These sites will yield an estimated 1 000 and 1 800 housing opportunities respectively. Land was also released for some 523 social housing opportunities in the Parow area. Construction on these projects is expected to commence in 2024 and 2025.

Work to promote energy security for backyard dwellers also continued. Through the City's partnership with the Resilient Cities Network (RCN), a prefeasibility study was conducted and a decision-making tool developed that will enable the City to adopt energy resilience technologies in City-owned facilities. Due to the regulatory and technical complexities posed by backyard dwellings, the City has shifted its focus from household-level intervention to enhancing City facilities to provide some level of energy services for the surrounding community. This may include cellphone charging stations and potential future upgrades to support cooling centres during periods of extreme heat. The prefeasibility study is focusing on a meat market in Gugulethu, a sports complex in Langa, a health facility in Khayelitsha, and a library in Dunoon. RCN has committed to providing \$60 000 to implement infrastructure upgrades in one of these facilities.

Finally, the Marikana informal settlement has been selected as the site where an alternative public lighting solutions initiative will be piloted, with a focus on solar-powered lighting. The project is still in an early phase, and the three service providers that have been appointed will be responsible for lighting design, community engagement, and monitoring and evaluation. The lights should be installed during 2025.

PROGRESS INDICATORS

It has not yet been possible to devise a suitable indicator to report on goal 10 due to limitations in data availability. Once these data challenges have been resolved, an indicator will be developed, and be reported on in future versions of this report.

GOAL 11: Ensure low-income residents are climate-resilient and have equitable access to essential services

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Improved climate resilience and access to essential services for low-income residents	Percentage of households living in informal dwellings	18,6% (2020)	16,7 % (2022)*	18,9% (2023)*

* As per General Household Survey 2022 and 2023.

STRATEGIC FOCUS AREA 7: CARBON-NEUTRAL ENERGY FOR WORK CREATION AND ECONOMIC DEVELOPMENT

OVERVIEW

Energy diversification to enhance security of supply for economic growth is one of the Mayor's priority programmes and well embedded in the current IDP (2022-2027). Making Cape Town's energy system more resilient and better able to deliver reliable, affordable and carbon-neutral energy is critical to achieve the economic growth required so that more Capetonians can participate meaningfully in the economy and see their families prosper.

In October 2023, the City adopted a new Energy Strategy to provide a framework for navigating the rapidly transforming energy landscape for the benefit of residents and businesses in the short, medium and long term. With the long-term vision of transforming the energy system to be carbon-neutral by 2050, the Energy Strategy's key priorities and programmes are implemented through a three-phased approach to enable and drive change in the energy system over time.

Reporting on this SFA covers three goals:

- ✓ **Goal 12:** Move as quickly as prices and opportunities allow towards 100% clean electricity supply by 2050
- ✓ **Goal 13:** Get technologically and commercially ready to operate the metropolitan distribution grid of the future
- ✓ **Goal 14:** Minimise the economic cost of energy transition through maximising energy efficiency and developing a regional value chain for carbon-neutral molecular fuels



The tender for the City's solar PV facility at Atlantis was awarded during the reporting year. Battery storage will be integrated at this site.

PROGRESS IN 2023/24

The 2023/24 reporting year saw continued progress towards the goals above. In response to the national energy supply challenges and price hikes, the City is increasing its focus on achieving energy security. This has led to decisive steps to implement its energy diversification programme through initiatives such as renewable-energy own-build projects, the SSEG programme, the wheeling pilot, and independent power producer (IPP) programmes. Since the development of the CCAP, significant changes have also been announced at the national level to alleviate policy blockages and constraints, and unlock new generation capacity in the electricity sector. The City's current efforts in this regard are aimed at addressing challenges associated with procurement from SSEG operators and surpluses from wheeling customers.

The City continues to make significant advances in its IPP programme, which will be key in mitigating load-shedding and diversifying Cape Town's energy supply. The evaluation phase has been completed and preferred bidder status has been reached for 30 MW, while several appeals were upheld and several additional preferred bidder statuses were issued. Other, larger own-build activities include the Atlantis 7 MW solar PV facility, for which the tender was awarded in the reporting year. A second solar PV plant in Paardevlei, Somerset West, is planned, which could yield between 30 and 50 MW. This project is currently in the feasibility study phase with support from the C40 Cities Finance Facility and GIZ for the required specialist studies. In addition, the City carries on with the roll-out of SSEG systems for municipal facilities, with approximately 1,4 MW already commissioned at the time of reporting. As part of its Battery Energy Storage System (BESS) Roadmap, the City has finalised its pilot site selection, and a tender has been developed for the procurement of a BESS at the Atlantis PV plant.

To promote the uptake of SSEG, ongoing awareness campaigns educate customers on the changes to the SSEG process, including the implementation of standardised SSEG system configurations, and the launch of the new online SSEG application system. The go-live of the online application system has been a definite highlight for 2023/24. The system allows for the entire SSEG registration application and processing to take place online, with increased transparency, faster turnaround times, and the automatic issuing of permission-to-install letters for certain system configurations. This is being complemented by updates to the informational SSEG webpage and booklets, an SSEG Newsflash newsletter for installers, and SSEG installer events.

Customers with SSEG now also have the opportunity to feed energy back into the grid through the City's implementation of an attractive feed-in tariff and an additional feed-in incentive per kWh. This is in addition to the Cash for Power programme, which allows customers to generate in excess of their consumption and be remunerated accordingly in line with the Municipal Finance Management Act regulations. The City's wheeling pilot, in turn, has been split into two phases – traditional and pooled wheeling – to accommodate the ever-changing energy landscape. The pilot currently includes 25 generators, 40 customers, and a proposed total of 355 MW to be wheeled.

The roll-out of City campaigns aimed at promoting energy efficiency – such as the winter (electricity) savings and summer energy-efficiency campaigns – as well as the Energy, Water and Waste Forum have continued. These are detailed under SFA 8 (Buildings) and CCWA 4 (Communication).

In addition to the adoption of the Energy Strategy, efforts to strengthen the City's energy planning work in the past year included a USAID-funded study to assess load-shedding mitigation options, supply planning, and the development of an evidence base to inform shorter-term load-shedding responses and longer-term decisions on power system development at scale. The City also procured Plexos, a leading energy market simulation engine. The software was used to test the City's two least-cost models for electricity capacity expansion, as developed by the CSIR (Electricity Pathways studies 1 and 2), and to evaluate the bids for the City's IPP1 and IPP2 electricity supply tenders. Additionally, at the time of reporting, the tender to appoint

a service provider for the 2025 Cape Town State of Energy and Carbon report was in the final contracting phase. The specification for this work was the most detailed to date.

The combination of severe load-shedding and above-inflation price increases have accelerated private and public investment in local generation and storage. While load-shedding had been suspended for over 200 days by November 2024, the growth in embedded renewables on the local grid continues. This capacity, supported by utility-scale storage, may still approach the minimum system load in the medium term. This variable renewable energy resource, combined with the surpluses from wheeling contracts and rapidly increasing SSEG, is one of the factors driving the need for transition of the utility to include a distribution system operator (DSO) to better manage a diversity of energy sources in real time.

Models of the envisaged functions and mandates of a DSO in the South African context vary and will likely be hotly contested as Eskom's Distribution Division establishes its business in a radically new landscape. However, the establishment of DSOs is essential for better real-time management of the growing diversity of energy sources on local grids. The proposed wholesale market model envisions a role for DSOs along the lines of the European Union model – maintaining and operating local networks so that generation can be delivered to loads as bid on a centralised exchange platform. Other functions might include supporting the national system operator and market operator with key services such as node voltage support, congestion management, and metering data.

Ideally, in this model, the retail of electricity on local grids would be financially and institutionally separated. The City's energy security goals favour a DSO model that is connected directly to the transmission network, and not to Eskom Distribution Division assets, and with greater autonomy to balance supply and demand locally, and possibly even operate a local power exchange. Regardless of the model of DSO that emerges from the very fluid regulatory environment, the City's DSO will have to manage the impact of a large number of distributed energy resources on the local grid. This has made investment in an advanced distribution management system, and the highly detailed GIS-linked asset master data required to support it, critical.

Utility reform to respond to the rapidly changing energy sector has been a priority and constitutes one of four work streams in the Mayor's priority programme for energy. Accordingly, GreenCape undertook a study to guide utility reform, and the Palmer Development Group and Sustainable Energy Africa conducted an extensive scenario study to inform financial model reform. These will help determine the potential future state. A generation cost-of-supply model is being developed and should be completed in 2024/25. The German KfW Development Bank has made funding available for reform work, which will take approximately three years to implement once all the contractual arrangements are in place.

PROGRESS INDICATORS

GOAL 12: Move as quickly as prices and opportunities allow towards 100% clean electricity supply by 2050					
Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
More accessible and affordable clean energy that constitutes an increasing share of the City's electricity supply	City-enabled renewable energy as a share of the total electrical energy supplied to the City's distribution grid	0,08% (2020)	7% (2030)	0,13% (2021)*	0,16% (2022)

GOAL 13: Get technologically and commercially ready to operate the metropolitan distribution grid of the future

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Increased resilience of the City's electricity utility business, while maintaining grid reliability in the face of transitioning disruption	Total capacity of approved, grid-tied and commissioned SSEG installations city-wide	60,7 MVA (total end 2020/21)	107,8 MVA	142,5 MVA

GOAL 14: Minimise the economic cost of energy transition through maximising energy efficiency and developing a regional value chain for carbon-neutral molecular fuels

Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
More energy-efficient Cape Town economy that enables energy data transparency and carbon-neutral products	Electricity intensity of the city's economic output	Data for 2018 calendar year: 19.7 kWh/unit GDP*	15 kWh/unit GDP (2030)	Data for 2021** calendar year: 15.2 kWh/unit GDP*	Data for 2022 calendar year: 18,82 kWh/unit GDP*
	Number of energy datasets on City's Open Data Portal	16 (2022)	30 (2025)	20	47

* Full units: [kWh electricity supplied/R1000 Real GDP in 2021 Rands]

** Residual Covid-19 effect for 2021 calendar year.



The City's energy security goals needs to consider managing the impact of a large number of distributed energy resources on the local grid.

STRATEGIC FOCUS AREA 8: ZERO-EMISSION BUILDINGS AND PRECINCTS

OVERVIEW

Energy use across commercial, municipal and residential buildings makes up the largest total contribution to GHG emissions in Cape Town. The City is committed to accelerating transformative climate action in the built environment, as demonstrated through the net-zero carbon buildings goals embedded in the Climate Change Strategy and Action Plan. These commitments require all new buildings citywide to be net-zero carbon in operation by 2030, and the pursuit of net-zero carbon for all existing buildings by 2050. To lead by example, the City has also committed to ensuring that – for its own operations – all new facilities are net-zero carbon in operation by 2030, and to achieve the same for existing facilities as far as possible.

Reporting on this SFA covers three goals:

- ✓ **Goal 15:** All new buildings (residential, commercial and municipal) to be net-zero carbon by 2030
- ✓ **Goal 16:** All existing residential and commercial buildings to be retrofitted with energy-efficient technologies to be net-zero carbon in operation by 2050
- ✓ **Goal 17:** All existing municipal buildings (excluding industrial plants) to be net-zero carbon by 2030

PROGRESS IN 2023/24

A key development in the pursuit of net-zero carbon for private buildings over the past two reporting years has been the updating of the national energy-efficiency regulations with SANS 10400-XA Edition 2,^{ix} which significantly increases the energy-efficiency ambitions of the National Building Regulations. This shifts the focus away from the need for city-specific regulations towards supporting compliance with national regulation.

Following the successful training of all plans examiners in the previous reporting year, additional funding was obtained for training in 2023/24, resulting in 55% of building inspectors being trained. At the time of reporting, 95% of all staff employed to ensure that buildings comply with the National Building Regulations had been trained, capacitating both desktop and on-site officials who assess SANS 10400-XA compliance. In addition, an in-depth study benchmarked the current level of compliance with SANS 10400-XA with a view to determining where further energy-efficiency measures may be required. Completed in November 2023, the study revealed a substantial compliance figure of 71,3% for plans assessed (500).

Recommendations from the study included capacitating officials responsible for plan approvals and on-site inspections with the updated version of the regulations, as well as practical tips and checklists for on-site verification, and supporting digital options for ongoing and greater compliance. In addition, communication with professionals and homeowners highlighted the important role of energy efficiency at home. Therefore, efforts to capacitate, communicate and support SANS 10400-XA compliance continue, working alongside stakeholders across the administration and the building supply chain.

In terms of low-income communities, some measures have been incorporated into the design and delivery of state-subsidised housing over the past several years to address sustainability and climate resilience,

^{ix} The national regulations that govern energy efficiency in all new and renovated buildings.



in accordance with the National Building Regulations. There is also an increasingly strong focus on the development of social housing in close proximity to transport nodes. However, the implementation of the revised housing subsidy quantum (by the national Department of Human Settlements) and the inclusion of a 500 W solar system for each housing unit remained uncertain at the time of reporting.

The City takes a holistic and system-wide approach in its pursuit towards net-zero carbon buildings. It encourages energy efficiency, while supporting and facilitating renewable energy across the various projects described under SFA 7, to move towards increasing energy security and decarbonising the grid. In line with this approach, the City continued to engage with property and energy market stakeholders and implemented various awareness initiatives over the reporting year. These include the ongoing hosting of the Energy, Water and Waste Forum events, activations of My Clean Green Home (Cape Town's first net-zero carbon home exhibition), the Let's ACT at Home exhibition at the Cape Town Building Centre, dissemination and display of Smart Office posters at City facilities, development and distribution of SSEG information booklets and newsletters, SSEG installer events, and many more. The City's Smart Buildings webpages have been updated to align with the administration's drive to reach net-zero carbon for buildings, and a guide has been developed to help homeowners understand SANS 10400-XA compliance.

Obtaining existing building energy data from external parties remains a challenge, and the City recognises the need to gain more insight into, and understanding of, existing building energy usage as well as levers that can influence change with building owners. Factors currently supporting this goal include market and legislative drivers such as voluntary net-zero carbon commitments, financial incentives such as loans linked to sustainability or green building certification.

In terms of its own buildings, the City continues to implement energy-efficiency retrofits and has expanded the scope to include lighting systems and split-unit air conditioning systems. With another 27 buildings that underwent lighting retrofits with LED and occupancy sensors in 2023/24, a total of 169 buildings had been retrofitted as of June 2024. Eight buildings were retrofitted with energy-efficient air conditioning in the past year.

A key focus area under the municipal buildings programme remains the City's work towards obtaining energy performance certificates (EPCs). This is in line with the national requirement for all public buildings that meet the criteria (certain occupancies, and larger than 1 000 m²) to have an EPC publicly displayed. EPCs are an important stepping stone towards the goal of net-zero carbon buildings, as they pave the way for data collection and benchmarking. The City is leading the country in EPC compliance by holding the most EPCs (69) for any public or private property portfolio. In the reporting year, the City focused on refining the additional list of 50 facilities identified as requiring an EPC. Engagement with departments continued through the EPC Forum, which was established in the previous reporting year to coordinate implementation of EPCs across the organisation and raise awareness of the role of energy efficiency and the City's net-zero goals for municipal assets among facility managers. At the time of reporting, the City was busy developing and finalising the tender specifications for EPC phase 2, which will be in place for a three-year period.

Finally, the Roadmap for Net-Zero Carbon Municipal Buildings by 2030, developed in 2022 and expanded in 2023, continues to drive work in this area. The aim is to support the City in scaling up its energy-efficiency and embedded renewable-energy programme with a focus on its municipal buildings and selected facilities, as well as wastewater and water treatment works. To support this work, the activation of a municipal buildings coordination group is being explored to provide strategic oversight, coordination, guidance and knowledge exchange for initiatives relating to the management, operation and sustainability of all municipal buildings.

PROGRESS INDICATORS

GOAL 15: All new buildings (residential, commercial and municipal) to be net-zero carbon by 2030

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
All new buildings (residential, commercial) are designed and constructed to be net-zero carbon by 2030	Percentage of City building control officers, planners and examiners trained and capacitated on the SANS 10400-XA:2021 Edition 2 regulations	New indicator	100% of building control officers, planners and examiners trained	100% of building control officers, planners and examiners trained. Additionally, 55% of building inspectors were trained in 2023/24.*
	Improving data collection relating to building energy efficiency	New indicator	Compliance study of 501 buildings under way to determine level of SANS 10400-XA compliance of building plans across all eight districts. Study included process case studies that addressed data collection and ongoing compliance.	Compliance study concluded. The study revealed that the plans approved during the specific period were substantially compliant with the regulations, achieving a 71,3% overall compliance rating.

*Indicator to be adjusted to include this category.

GOAL 16: All existing residential and commercial buildings to be retrofitted with energy-efficient technologies to be net-zero carbon in operation by 2050

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
More enabled residential and commercial sectors to achieve net-zero carbon building compliance through incentives, guidelines and disclosure	Total number of approved grid-tied installations commissioned (legalised) for the residential and commercial sectors	1 698 (1 349 residential; 349 commercial)	4 077 (3 509 residential; 568 commercial and industrial)	6 462 (5 766 residential; 696 commercial and industrial)

GOAL 17: All existing municipal buildings (excluding industrial plants) to be net-zero carbon by 2030

Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
All existing and new municipal buildings (excluding industrial plants and utilities) are retrofitted, or designed and constructed, to be net-zero carbon by 2030	Annual measured and verified electricity savings from energy-efficiency projects in municipal operations	1 784 112 kWh (2022/23)	1 800 000 kWh (2023/24)	1 784 112 kWh	2 042 458 kWh
	Share of zero-carbon electrical energy used by City-owned or leased buildings for public-sector service and administrative purposes	1%	100% (2030)	1% (2021)	1,06% (2022)



STRATEGIC FOCUS AREA 9: MOBILITY FOR QUALITY OF LIFE AND LIVELIHOODS

OVERVIEW

In recent years, the transport sector has accounted for roughly half of the total energy consumed in Cape Town. Fossil fuels used by internal combustion engines are the second-biggest source of the city's emissions (after electricity consumption), contributing significantly to Cape Town's carbon footprint and local air pollution. It is also a net drain on the local economy, exposing it to volatile crude-oil prices. The goals under this SFA focus on achieving a system of mobility in Cape Town that is not only low-carbon, but also enables an improved quality of life and livelihoods.

Reporting on this SFA covers four goals:

- ✓ **Goal 18:** Through the City's role as the transport planning authority as well as the contracting authority for bus rapid transit (BRT) services, support the restoration, rehabilitation and expansion of the rail system to a carrying capacity of 30% above 2010 levels by 2030, and put in place a contingency for alternative mass transit infrastructure in the event that the rail system does not recover or ceases to be functional altogether
- ✓ **Goal 19:** Integrate transport modes to improve efficiency and fast-track a modal shift from passenger kilometres by private vehicles to other modes (decreasing from 58% in 2016 to 23% in 2050)
- ✓ **Goal 20:** Prepare for a scenario of complete transition to electric or alternative fuel-powered freight, bus, taxi and passenger vehicles by 2050
- ✓ **Goal 21:** Ensure that climate change and air quality monitoring and metrics for transport adequately support the assessment of actions and by-laws in the sector

PROGRESS IN 2023/24

The multiyear programme to review and update the City's Integrated Public Transport Network (IPTN) 2032 plan, was under way during the reporting year and is expected to be completed by 2026. The new approach embraces critical uncertainties, including future scenarios where the provision of rail does not occur, with other modes addressing travel needs. The IPTN review also intends to include a more explicit focus on the importance of non-motorised transport (NMT). The implementation plan will consider approaches to incrementally increase public transport efficiencies and, therefore, attractiveness.

Meanwhile, in the context of the sharp decline of passenger rail over the past few years in Cape Town (and across South Africa), the City continues to explore and pursue the devolution of the rail service. A project is under way to investigate the feasibility, risk and implications of the urban passenger rail function as part of the City's public transport function. By the end of 2023/24, the Cape Town rail study was 81% complete, and several key deliverables were nearing completion. This comprehensive analysis will be crucial in shaping the future structure and management of Cape Town's urban rail system, ensuring that it supports the City's transport and economic recovery goals. Furthermore, engagements with PRASA and relevant rail stakeholders are ongoing through relevant committees. In conjunction with the ongoing collaboration between the City and PRASA, progress has been made with the development of a service-level plan to define the roles and responsibilities for the management and operation of urban rail services.

The City's pilot project to operationalise transport operating companies, supported by a service provider of the national Department of Transport, is currently in its data collection phase. The data collected from the smart cameras fitted to all operational vehicles of the pilot taxi association is essential for the optimisation of the minibus-taxi service offering. Building on the congestion management prioritisation study and work reported on previously, the programme for public transport priority measures is under way. As part of this programme, planning of a dedicated public transport lane on the N2 outbound will be initiated in 2024/25. Other congestion improvement interventions implemented in the reporting year include the installation of lithium uninterruptible power supply systems at 500 intersections, and the completion of a new reversible lane signalling system to reduce the impact of congestion on the MyCiTi service along the R27.

The City's Future of Work programme, which included the development of remote and hybrid working guidelines for the City as an organisation, remains in place. Committed to engaging other large organisations to encourage similar programmes citywide, and to sharing lessons learnt, the City had an exchange with Accelerate Cape Town – a business leadership organisation representing top-tier corporate business in the Cape Town city region.

Strategic planning and implementation of the NMT implementation programme is ongoing, and infrastructure projects in progress in the 2023/24 reporting year include NMT facilities in Khayelitsha, Mitchells Plain, Hanover Park, Heideveld, Kensington and Klipfontein/Gugulethu. In the past year, an NMT project prioritisation tool was developed, and the development of a new NMT strategy, since renamed the Walking and Cycling Strategy for Cape Town, got under way.

The City's planning and enabling work in transitioning to electric or alternative fuel-powered transport continues to progress steadily. Following the feasibility study on alternative energy and zero-emissions bus technologies to inform future decisions regarding MyCiTi bus procurement, Council has approved a Dual-Path Bus Procurement Strategy for both low and zero-emissions vehicles. Acting within this strategy, the Public Transport Department currently has two long-term tenders in the market for the supply and delivery of 12 m low-floor/low-entry battery electric buses and 18 m low-floor/low-entry diesel-powered buses respectively.

In parallel, further analysis of the City's corporate fleet electric vehicle (EV) pilot programme to inform future decision-making on fleet composition was completed in 2023/24 in partnership with GreenCape. The study outcomes reveal a business case for the use of EVs by municipal fleets – if the EV alternative is fit for purpose and within price parity of existing internal combustion vehicles. Ongoing investigations on future phases are under way, including a benchmark study tour to engage with European countries that have been experimenting with EV technology.

The City also continues to collect and monitor the data of the solar-powered public EV charging stations at two of its municipal buildings. The stations employ the City's web-based SmartFacility data dashboard to collect data on charger use and customer behaviour, as well as track and show the system's energy consumption in near-real time. Since the project's first installation in December 2020 until June 2024, the two EV chargers provided 56 410 km of emission-free driving, which translates to savings of just over 10 tCO₂e, while any excess solar energy was consumed by the municipal buildings where the chargers are located.

The City, in collaboration with GreenCape, Province and relevant EV task team stakeholders, has also continued to support activities that enable citywide EV uptake. External multistakeholder engagements through the agency of the EV task team (now chaired by Province) are conducted with national and local government, the local and international private sector as well as government agencies to discuss and create awareness of EV policies and strategies as well as the barriers and opportunities in the industry. To progress and coordinate its transversal EV work internally, the City has formed an EV steering committee and an EV working group, which met during the reporting year.

Finally, progress with transport emissions data management and improvement includes the ongoing annual data collection process to calculate relevant emissions of the Urban Mobility Directorate, using the Enterprise Performance and Carbon Management (EPCAM) carbon footprint model. At the time of reporting, data collection was complete and analysis was under way.

PROGRESS INDICATORS

GOAL 18: Through the City's role as the transport planning authority as well as the contracting authority for bus rapid transit (BRT) services, support the restoration, rehabilitation and expansion of the rail system to a carrying capacity of 30% above 2010 levels by 2030, and put in place a contingency for alternative mass transit infrastructure in the event that the rail system does not recover or ceases to be functional altogether

Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
Rail system carrying capacity restored to 30% above 2010 levels by 2030, and contingency plans for alternative mass transit infrastructure developed	Modal split between private transport, public transport and walking based on main mode to work	58%:33%:9%	N/A	58%:33%:9%	58%:33%:9%
	Provision of professional services to undertake an investigation that would enable the City to support the restoration and sustainability of passenger rail services that align with the City's Comprehensive Integrated Transport Plan	New indicator in SDBIP	Phase 2: Baseline assessment of the City's rail system 60% complete (2022/23) Phase 3: Alternative institutional report 50% complete (2023/24)	Phase 2: Baseline assessment of the City's rail system 86% complete	Phase 2: Baseline assessment of the City's rail system 100% complete Phase 3: Alternative institutional report 71% complete

GOAL 19: Integrate transport modes to improve efficiency and fast-track a modal shift from passenger kilometres by private vehicles to other modes (decreasing from 58% in 2016 to 23% in 2050)

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Public transport share (including NMT) is maintained or increased	Modal split between private transport, public transport and NMT based on main mode (weighted average of mode to work and education combined)	45%:29%:26%	45%:29%:26%	45%:29%:26%
	Length of NMT paths built on an annual basis*	22,4 km (2020/21)	9,5 km	0 km

* The number of NMT kilometres constructed is derived from the sum of the lengths of the footways, cycle paths and shared facilities to be constructed, measured in terms of actual progress reported on the latest approved construction programmes. Note that projects in the NMT programme are procured and executed in phases depending on budget availability, and that the length delivered per year varies depending on the phase of the project delivery cycle.

GOAL 20: Prepare for a scenario of complete transition to electric or alternative fuel-powered freight, bus, taxi and passenger vehicles by 2050

Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
Increased proportion of electric or alternative fuel-powered freight, bus, taxi, City fleet and passenger vehicles	Percentage of MyCiTi fleet that is low-emissions*	0%	N/A	0%	0%
	Number of multistakeholder engagements to grow the e-mobility ecosystem in the Western Cape	3 per annum	3 per annum	3	1

* Tracks the percentage of the City's MyCiTi (bus rapid transit service) buses that are electric or powered by alternative fuel.

GOAL 21: Ensure that climate change and air quality monitoring and metrics for transport adequately support the assessment of actions and by-laws in the sector

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Improved climate change and air quality metrics for the transport sector are developed and adopted	Climate change and air quality metrics for the transport sector developed*	N/A	Urban Mobility annual carbon footprint calculation: 32 041 tCO ₂ e (2021 data) Environmental Index: Not yet developed.	2022 data was collected, but analysis not completed; therefore, 2021 data reported again

* This indicator assesses whether a baseline carbon footprint measurement assessment and action plan for the Urban Mobility Directorate has been produced, updated and integrated, and whether an environmental index (including air quality) has been developed to supplement the Urban Development Index.



STRATEGIC FOCUS AREA 10: CIRCULAR WASTE ECONOMY

OVERVIEW

The City recognises that landfilled organic waste is not only a contaminant of other, potentially recoverable materials in the waste system, but also a significant source of methane emissions, which have historically resulted in the waste sector accounting for 10–11% of Cape Town's citywide GHG emissions. This needs to be considered against the backdrop of the larger transition to a circular waste economy as a shared responsibility, and in conjunction with supporting measures to reduce the amount of waste sent to landfill. Many of the actions under this SFA aim to increase the understanding of the costs and benefits of – and the resources required for – this transition, and to strengthen the evidence base and technical capacity.

Reporting on this SFA covers four goals that focus on gaining economic benefits from waste, and reducing its environmental impact:

- ✓ **Goal 22:** Develop and implement an integrated waste management strategy that is financially feasible and maximises material efficiency by prioritising waste avoidance, reduction, treatment and recycling in line with national targets
- ✓ **Goal 23:** Reduce organic waste disposal to landfill (in line with Provincial Integrated Waste Management Plan targets) by 50% by 2022, and 100% from 2027, through better waste separation, treatment and utilisation
- ✓ **Goal 24:** Increase diversion of recyclables from disposal to landfill to 40% by 2025, 55% by 2030, >70% by 2035, and 85% by 2050, through improved collection, waste separation, and providing support to informal workers
- ✓ **Goal 25:** Reduce the climate and environmental impact of waste disposal and wastewater treatment facilities by increasing biogas and landfill gas collection efficiency, treatment and utilisation

Achieving these goals, which are aligned with stringent national and ambitious provincial diversion targets, will require partnerships with communities and the private sector, and the acceleration of various programmes.

PROGRESS IN 2023/24

At a planning and policy level, a process is well under way to develop a waste strategy for Cape Town that is built on the commitment pillars of optimising existing services, minimising waste to landfill, and maximising the basket of services. Work is also ongoing towards improving the waste management evidence base. Waste service providers and generators have been making good use of the City's online accreditation application system to register their waste management functions, and work continues to enhance the management and reporting of data on solid waste diversion and disposal. A feasibility study regarding the envisaged regional facility as well as alternative technologies to formalise waste diversion commenced in the reporting year, and will include two waste characterisation studies.



The City has initiated a number of programmes and pilots towards increased organic waste diversion.

In the past year, various pieces of activities relating to the circular economy were ongoing in collaboration with GreenCape. The piloting of a selection of recommended interventions from the Circular City Waste Scan (2023) has been included as an action item in the Draft Waste Strategy. Ongoing collaborative circular-economy work with GreenCape includes interventions to explore opportunities for organic waste beneficiation in Cape Town through innovative technologies. Significant investments for companies and initiatives engaged in black soldier fly farming* have been achieved in this industry, totalling \$500 000 and \$3,2 million in fixed assets.

GreenCape has facilitated industry engagement with relevant stakeholders to unpack the legislative and other opportunities and barriers faced in the organic waste sector. Broader engagement with various industry sectors included the facilitation of resource exchanges between companies to foster industrial symbiosis. The City actively participated in a circular textile event in April 2024, which was co-hosted by City business partners GreenCape and the Cape Clothing and Textile Cluster, in collaboration with the World Wide Fund for Nature (WWF) South Africa. Discussions at this event centred on opportunities to embed circularity into the textile industry's resurgence. Plans have advanced to establish a circular textile industry body, fostering sustainable practices and creating platforms for future initiatives.

The City has also initiated a number of programmes and pilots towards increased organic waste diversion. Key highlights include the following:

- ✓ Awareness campaigns encouraging waste generators to submit integrated waste management plans, including organic waste diversion, which reached 315 waste generators
- ✓ Altogether 325 applications for accreditation received from waste service providers, 248 of which were approved
- ✓ The continued operation of drop-off sites for garden waste, which is then chipped and composted for reuse by private business
- ✓ Roll-out of home composting containers (47 951 to date) to residents across town, free of charge
- ✓ A number of trials for the diversion of food waste from landfill, building on lessons learnt from previous trials. This includes organic waste separation-at-source trials with fruit and vegetable traders and feeding schemes, and the use of City drop-off sites for residents. A further organic food waste collection and aggregation trial, with the waste being taken to the Bellville compost plant for processing, was initiated.
- ✓ Ongoing development and maintenance of a waste recyclers map that shows the location and contact details of private drop-off sites as well as collectors of recyclables and organic waste operating across Cape Town

Various waste-related awareness and communication programmes are ongoing, including promoting waste avoidance, reuse and recycling (waste minimisation) and the prevention of illegal dumping (cleansing). A few examples of programmes that ran in 2023/24 include clean-up campaigns; drop-off awareness drives and community exhibitions; collaboration with the My Clean Green Home exhibition; awareness tours to Kraaifontein Integrated Waste Management Facility and Coastal Park landfill; targeted interventions with spaza shops on organic waste and general waste diversion; waste management training sessions for small, medium and micro-sized enterprises; and the production of online publications and booklets.

* Black soldier fly (*Hermetia illucens*) larvae are gaining traction as a solution to unlock the circular economy by upcycling low-value organic waste into high-value products with multiple applications, most notably in animal feed and pet food, but also for crop production and healthy soils.

The City is also planning and designing additional materials recovery facilities (MRFs), which will enable the larger-scale expansion of, and participation in, the Think Twice dry recyclable waste collection service. The Coastal Park MRF is planned to be commissioned by early 2025, while phase 1 of the Athlone MRF will also be taken forward. In the year in review, 387 376 tons of builder's rubble were reused at City landfill sites for cover, sloping and road-building.

The separation of recyclables and organics at, and their collection from, municipal buildings and facilities requires further engagement to establish appropriate institutional structures and mechanisms, as it relies on the buy-in of multiple departments. It has been included as an action area to consider in the Draft Waste Strategy, and further engagement is planned for the next financial year.

Landfill gas infrastructure has been installed at the Bellville, Coastal Park and Vissershok landfill sites. Currently, the landfill gas is being flared, and the project is generating carbon credits, being a registered Clean Development Mechanism project. As of 2023/24, the total carbon emissions reduction achieved stood at 489 414 tCO₂e for Coastal Park, and 142 142 tCO₂e for Bellville. Phase 2 of the project focuses on utilising the landfill gas for electricity generation.

In addition, work has continued to develop biosolids beneficiation facilities (BBF). In the past year, a review of the City's Sludge Strategy was completed to ensure that it is still relevant, given legislative changes, possible technological advances as well as updated economic and financial considerations. The review did not reveal any significant changes required. Due to budget constraints, a public-private partnership is being considered for the Southern BBF installation, for which a section 78 process^{xi} has started. Work on the BBF has been paused pending the outcome of this process.

PROGRESS INDICATORS

GOAL 22: Develop and implement an integrated waste management strategy that is financially feasible and maximises material efficiency by prioritising waste avoidance, reduction, treatment and recycling in line with national targets

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Improved integrated waste management planning and implementation in line with national targets through the development of planning and financial mechanisms based on an improved evidence base	Finalisation of a new City waste strategy, and annual reporting thereon*	New indicator	Waste Strategy concept note approved by Mayor. Establishment of drafting team concluded, and drafting process under way.	Waste Strategy released for public participation in September 2024

* This indicator measures the percentage completion of the City's Waste Strategy, as well as annual reporting thereon.

^{xi} A mandatory evaluation process that municipalities must undertake once it is determined that a service delivery mechanism must be extended, upgraded or improved. Section 78 of the Municipal Systems Act provides that a municipality must first assess the provision of the relevant activity through an internal mechanism, after which it may decide to explore delivery through an external mechanism.

GOAL 23: Reduce organic waste disposal to landfill (in line with Provincial Integrated Waste Management Plan targets) by 50% by 2022, and 100% from 2027, through better waste separation, treatment and utilisation

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Reduced organic waste disposal to landfill in line with relevant provincial and national targets	Organic waste diverted by City programmes as a percentage of the organic waste that the City handles	26% (excluding wastewater sludge) 42% (including wastewater sludge)	24% (excluding wastewater sludge) 42% (including wastewater sludge)	41,34% (including wastewater sludge) <i>*Wastewater sludge accounts for 20% of the reported figure (2023/24).</i>

GOAL 24: Increase diversion of recyclables from disposal to landfill to 40% by 2025, 55% by 2030, >70% by 2035, and 85% by 2050, through improved collection, waste separation, and providing support to informal workers*

Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
Increased diversion of recyclables from disposal to landfill through improved collection, waste separation, and support to informal workers	Percentage of waste diverted from landfill sites through Council waste minimisation initiatives	21,34% (362 371 tons) • Organics 104 535 tons • Builder's rubble reused 222 094 tons • Builder's rubble entering landfill 434 411 tons (still to be reused)	14,9% (2022/23)	19,16% (317 496 tons) • Organics 95 091 tons • Builder's rubble reused 203 849 tons • Builder's rubble entering landfill 416 430 tons (still to be reused)	31,77% (646 159 tons) • Organics 229 505 tons • Builder's rubble reused 387 376 tons

* For purposes of this goal, "recyclables" refers to any waste stream that can be diverted from landfill for beneficiation in the economy, including recyclable packaging, organic waste and builder's rubble.

GOAL 25: Reduce the climate and environmental impact of waste disposal and wastewater treatment facilities by increasing biogas and landfill gas collection efficiency, treatment and utilisation

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Increased biogas and landfill gas collection, efficiency, treatment and utilisation	Landfill methane destruction (flaring and waste-to-energy)	New indicator	Total carbon emissions reduction to date: • 425 505 tCO ₂ e for Coastal Park landfill • 117 565 tCO ₂ e for Bellville landfill	Carbon emissions reduction: • 489 414 tCO ₂ e for Coastal Park landfill • 142 142 tCO ₂ e for Bellville landfill
	Number of biosolids beneficiation facility (BBF) installations that have come online	0	0. Programme still in the design phase.	0. Phase 1 of first BBF in design phase.

CROSS-CUTTING WORK AREA 1: MAINSTREAMING, GOVERNANCE, RESEARCH AND KNOWLEDGE MANAGEMENT

OVERVIEW

Mainstreaming is essential to make sure that the City's climate change response is not seen as the responsibility of only one or two departments, but becomes a shared responsibility across all City departments and functions, and is integrated into all relevant strategies, policies and plans.

Reporting on this CCWA covers two goals:

- ✓ **Goal 26:** Mainstream climate change responses into key City strategies, policies, processes and plans
- ✓ **Goal 27:** Conduct and commission climate-change-related research, and ensure that the City remains up to date with emerging research in the field

PROGRESS IN 2023/24

A high-level analysis of the City's sector plans took place in 2023/24 to report to National Treasury on climate change response integration into the administration's strategic priorities, as per the Guiding Circular on Rationalisation of Planning, Budgeting and Reporting Requirements for the 2024/25 Medium-Term Revenue and Expenditure Framework. The analysis found that climate change response had been integrated to varying degrees into all of the City's sector plans, but that there was still scope for further integration in most areas. Grant funding has subsequently been secured from the national Department of Cooperative Governance to undertake a detailed analysis of one key sector plan in 2024/25 and to make recommendations for the mainstreaming of climate change response into the City's sector planning and related processes.

Work has also continued on mainstreaming climate change considerations into City policy processes. In the year in review, these included the processes for the Draft Waste Strategy, the Energy Strategy, the Draft Fleet Management Strategy, the Draft Free Basic Alternative Energy Subsidy Policy, the Draft Floodplain and River Corridor Management Policy, the Urban Design Policy, the Supply Chain Management Policy, the Draft Comprehensive Integrated Transport Plan, the Air Quality Management Plan, the Draft Strategy to Address Rough Sleeping, the Draft Mobile Business Policy, the Draft Informal Trading Policy and By-law, the Draft Shared Network Charges Policy, the Draft Residential Reticulation Policy, the Urban Forests Policy, various budget policies (i.e. tariff policies), the Draft Affordable Housing Policy, the Emergency Relief Basic Services for Informal Settlements Standard Operating Procedure, the Draft Events By-law, the Draft Film By-law, the Draft Environmental Strategy, and the Draft Local Biodiversity Strategy and Action Plan.

With regard to the integration of climate change considerations into budgeting and project management, a screening questionnaire has been included in the City's project portfolio management (PPM) system. The questionnaire now requires project managers to consider whether their projects contribute to building resilience, and to tag their projects accordingly. Options for further building PPM integration will be explored once the City's Core Application Refresh project^{xii} has progressed further.

^{xii} A ten-year project for the transformation and upgrade of the software technology systems the City uses for service delivery, planning, and engagement with residents and business.

A high-level climate budget tagging exercise conducted in the past year showed that, for the 2024/25–2026/27 draft capital budget (three-year view), approximately R3,89 billion has been allocated to programmes or projects that respond to climate change as a primary goal. Another approximately R17,5 billion will be going towards projects that have climate change co-benefits, pointing to a significant level of integration of climate change considerations into the City's budget.

The process of establishing a climate change response forum for the City also commenced in 2023/24. This resulted in the reactivation of action 26.4, which had previously been reported as cancelled, as the consolidation of the climate change strategy and planning function in the Risk and Resilience Department had obviated the need for a formal coordinating body. However, in the past year, it was determined that convening such a forum would help the City meet the requirements of the Climate Change Act and promote increased co-ordination and knowledge-sharing across the various departments responsible for CCAP implementation, monitoring and reporting.

In terms of research, work got under way to review and update the City's Climate Change Hazard, Vulnerability and Risk Assessment Study, which was completed in 2019 and must be reviewed every five years. In 2023/24, the assessment was reviewed by the CSIR, who recommended that the report be updated to ensure alignment with the latest available scientific information, definitions and models. Grant funding is being pursued to complete the report update. Additionally, the research pipeline document continues to be updated as required, informing engagement with external funders regarding technical assistance.

The knowledge transfer programme, too, continued in the year in review and will draw to a close in 2024/25. The City's participation in the Cape Higher Education Consortium (CHEC) continues, with the administration supporting the implementation of current CHEC projects under the joint research programme, with a focus on social vulnerability. In 2024/25, the Policy and Strategy Department (Research Branch) will seek Council approval to contribute additional budget to the remaining CHEC projects. The Branch also continues to process requests from local and international researchers who apply to conduct research relating to the City, including research on climate change. More than 70 applications were approved in 2023/24.

On the innovation front, several events were held that focused on the risks posed by heat. A campaign was hosted on the City's collaboration platform that invited City staff to submit ideas for how the administration could communicate better about heat risks. To support the campaign, two Let's Talk sessions, held in conjunction with the City's Occupational Health and Safety (OHS) Branch, tackled the topic of extreme heat. In commemoration of the 2024 World Day for Safety and Health at Work (28 April), the OHS Branch also hosted an event themed "Ensuring safe and healthy work now in a changing climate", with speakers comprising both City staff and external experts.

Finally, work continued on enhancing the City's approach to managing climate change data. Unfortunately, the SmartFacility application experienced significant challenges due to the restriction of a key service provider; work is under way to re-establish the app in the City's corporate network. The Sustainable Energy Markets Department established an enterprise database that includes a renewable-energy certificates (RECs) database. This has improved the accuracy of REC record-keeping and will allow this information to be more easily accessed in future. ICLEI also facilitated a review of the Google Environmental Insights Explorer (EIE) data for the City, both to help validate the EIE estimates, and to assess whether the data could be integrated in City reporting. It was found that the data on vehicle kilometres travelled, as estimated from cellphones, was very useful as a direct measurement of transport activity within the metro's boundaries. This was timeous, as the fuel sales data reported for 2022 was of a poor quality. To overcome this, the EIE data was used to make a scaled correction, with 2019 as a baseline.

PROGRESS INDICATORS

GOAL 26: Mainstream climate change responses into key City strategies, policies, processes and plans

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Climate change response is mainstreamed into key City strategies, policies, processes and plans	Extent to which climate change response is mainstreamed into the City's project portfolio management (PPM) process	Climate change adaptation/resilience considerations included as a screening item in the City's PPM process	Guidebook developed to help project managers consider climate resilience in the project development process	Climate change adaptation/ resilience considerations included as a screening item in the City's PPM process, and continues to be used

GOAL 27: Conduct and commission climate-change-related research, and ensure that the City remains up to date with emerging research in the field

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Climate-change-related research is commissioned and conducted, and the City remains up to date with emerging research	Percentage of city area for which a climate change hazard, vulnerability and risk assessment has been undertaken in the past five years	100%	100%	100%



Work continues on enhancing the City's approach to managing climate change response related data.

CROSS-CUTTING WORK AREA 2: ECONOMIC IMPACTS AND GREEN ECONOMY OPPORTUNITIES

OVERVIEW

Climate change threatens to stagnate both local and global economic growth and development through its impact on international market competitiveness as well as the impact of climate risks. Therefore, a shift in economic activities and decision-making is required through an approach that prioritises low carbon, resource efficiency, and the conservation of ecosystem services and biodiversity.

Reporting on this CCWA covers two goals:

- ✓ **Goal 28:** Advance the local green products and services market, and reduce the risks of climate impacts on local economic development
- ✓ **Goal 29:** Support the development of a climate-resilient and carbon-neutral green economy through City operations

PROGRESS IN 2023/24

Progress towards developing a greener economy in Cape Town continued in the reporting year through activities focused on internal supply chain management processes and decision-making, the facilitation of investments in the local green economy, and green skills development and employment opportunities.

The Environmental Management Department continued to implement the short to medium-term actions in the City's Green Procurement Action Plan. One of the areas within this plan that has made significant progress over the past year includes the completion of a project for adopting green cleaning products at the City's Smart Living Centre. Based on the success of the project, Environmental Management plans to roll out the initiative across all City directorates. A decision has also been made to develop a directive for greening new City buildings, aligned with the City's commitments relating to a net-zero carbon built environment. This will be a collaborative initiative between the Sustainable Energy Markets Department, the Risk and Resilience Department, and the Urban Sustainability Unit.

Moreover, the City partnered with GreenCape on securing technical support for the implementation of the City's Green Procurement Action Plan, with a focus on supporting infrastructure planning and delivery. Finalised at the end of 2023/24, the project included activities such as workshops and other engagements, culminating in a set of guidelines for greening large capital projects, and an accompanying framework and process flow to mainstream the greening of infrastructure projects.

Work also continued on the development of various guidelines and specifications, including draft specifications for a range of material categories, draft guidelines for sustainable building procurement, draft sustainable design principles for different types of capital and infrastructure projects, and a draft set of guidelines for recycled building materials in City capital projects. Other work prioritised in the reporting year includes the ongoing development of case studies that showcase successful green procurement in projects and tenders. The intention is to publish these case studies in the 2025 edition of the Mayor's Portfolio of Urban Sustainability.



The Atlantis Special Economic Zone (ASEZ) saw significant development in 2023/24 and remains the key focus for green technology investment in Cape Town, particularly in renewable energy. GreenCape is playing a pivotal role in promoting the ASEZ and positioning Cape Town as a leading hub for green innovation. The ASEZ was also the City's strategic focus point for facilitating investments in Cape Town's green economy. The City also continues with international engagements and skills development initiatives to strengthen Cape Town's position as a leader in green technology and sustainable industrial development.

In addition to the implementation of the Investment Incentives Policy, the ongoing promotion of updated market intelligence on Cape Town's green economy through the Invest Cape Town brand has solidified Cape Town's reputation as a premier destination for green investments, with a growing international profile in key sustainability sectors. Investments in the reporting year focused on high-impact sectors such as renewable energy, sustainable manufacturing, recycling technologies and innovative waste solutions – all set to significantly enhance Cape Town's green infrastructure.

Other progress included the Atlantis Investment Facilitation Office's streamlined business support and guidance services to prospective investors, which made it easier for companies to navigate regulatory processes and efficiently establish their operations in the ASEZ. This has significantly contributed to establishing the ASEZ as a critical driver of Cape Town's green economy, attracting both local and international interest in the zone's sustainable industrial opportunities.

In addition to the facilitation of a number of skills development interventions to support the growth of the green economy in Cape Town, a significant highlight in 2023/24 was Cape Town's involvement in the Knowledge-Sharing Programme (KSP) in South Korea. This engagement provided an opportunity for the City's delegation to gain valuable insights into South Korea's advanced green technologies, and their approach to managing special economic zones. The lessons from the KSP have directly informed the management of the ASEZ and created new potential opportunities for investment partnerships with South Korean companies, particularly in the renewable-energy and sustainable manufacturing sectors.

Finally, the City continued to implement the invasive species and green jobs skills development and mentoring programmes. The Invasive Species Unit also continued to facilitate a number of jobs relating to invasive species control for various line departments, subcouncils and wards. Of the 15 vacancies in the Biodiversity Management Branch in 2023/24, three were filled by EPWP skills development candidates, and six career advancements were from those who previously formed part of the EPWP skills development programme, highlighting the value of this programme for both the City and participants. Staying with the EPWP skills development programme, a key highlight was the 2024 EPWP awards ceremony, where the programme scooped several prizes. These included Benchmark Project of the Year (awarded to the Kader Asmal skills development programme), winner of Best EPWP Environmental and Cultural Sector Project, runner-up in the Best EPWP Project Implementation category, and team runner-up in the Most Innovative Project category (also awarded to the Kader Asmal skills development programme).

PROGRESS INDICATORS

GOAL 28: Advance the local green products and services market, and reduce the risks of climate impacts on local economic development

Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
Economic growth is stimulated through a climate-resilient local economy and the development of local green products and services markets	Value of green tech investments facilitated/brought to Cape Town	R194 650 000	R1 billion (2023/24)	R1,733 billion	R686,75 million*
	Number of industry events hosted	19	18	16	23

* Total value of green tech investments facilitated/brought to Cape Town in 2023/24 was R1,373 billion. However, only 50% was allocated to the City (R686,75 million), and the other 50% to Wesgro.

GOAL 29: Support the development of a climate-resilient and carbon-neutral green economy through City operations

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
A climate-resilient and carbon-neutral green economy is developed and supported through City operations	Number of job opportunities created as a result of the implementation of green jobs projects	3 811 (2021/22)	3 279	4 072



The City engages key stakeholders and collaborates with partners such as GreenCape to position Cape Town as a leading hub for green innovation.

CROSS-CUTTING WORK AREA 3: BUSINESS MODELS, REVENUE AND FINANCING CLIMATE CHANGE RESPONSE

OVERVIEW

Climate finance is an important mechanism to enable the implementation of both mitigation and adaptation programmes and projects, and includes loans, grant funding and technical assistance. In addition, reviewing the way in which the City does business – through its revenue model and other mechanisms – may offer important opportunities for responding to the various financial risks posed by climate change.

Reporting on this CCWA covers two goals:

- ✓ **Goal 30:** Investigate sources of climate finance and the use of innovative financial mechanisms to support climate change response, and implement these where feasible
- ✓ **Goal 31:** Use financial mechanisms, including business models, tariffs, investment and divestment, to respond to climate change impacts and mitigation opportunities

PROGRESS IN 2023/24

The Technical Partnerships Unit (TPU) proactively works with internal and external stakeholders to secure climate-related funding for the administration and help identify suitable City project proposals. The Unit has already established a technical assistance tracker, and a donor database is being developed. The TPU also undertakes quarterly progress reporting to the City's Executive Management Team.

In the year in review, the City continued to receive climate-change-related technical assistance from the C40 Cities Finance Facility, co-funded by GIZ, to develop a business case for using green infrastructure in catchment management, as well as for another project focused on the use of renewable energy in municipal buildings. As the City forms part of the global C40 Cities network, it also received further support from C40 to assess market appetite for utility-supplied green energy, and to conduct building inspector training.

With regard to new climate-change-related technical assistance, the City has been approved for or granted funding from the following institutions:

- ✓ The Agence Française de Développement (AFD) Cities and Climate Facility (CICLIA), for a coastal adaptation planning project to deliver critical coastal sea-level rise modelling and planning for the False Bay coastline
- ✓ The World Bank, for the development of a Smart Grid Implementation Roadmap
- ✓ The African Development Bank's Urban Municipal Development Fund, for the following three climate studies:
 - Update of the hazards, risks and vulnerability study for Cape Town
 - Water-sensitive city plan
 - Design, conceptual development and piloting of a real-time heat monitoring network for Cape Town

- ✓ The GIZ, under the following programmes:
 - GIZ SAGEN (South African-German Energy Programme): Programme that supports embedded generation in Municipalities
 - GIZ SAGEN CET II (South African-German Energy Programme – Capacities for the Energy Transition): Programme that supports capacity-building in the area of energy transition
- ✓ The KFW, for costing the services of the City's electricity generation business
- ✓ The Resilient Cities Network, under their Urban Power Programme
- ✓ The USAID Southern African Energy Programme least-cost optimisation study

Work also commenced on the Water Research Commission alternative sanitation pilot, which includes grant support to the City from the Bill and Melinda Gates Foundation, with a combined value of approximately R100 million.

The City continued to support the divestment of financial assets from fossil fuels, and investment in climate-friendly opportunities, through the continued implementation of its Cash Management and Investment Policy. The policy outlines a list of prohibited investments, including investments "in instruments which consist of assets and activities whose value is realised through the release of unmitigated high levels of carbon dioxide". Fund managers contracted by the City are required to annually certify that investments are managed in accordance with this policy.

With the help of C40, the City in 2023/24 convened a session with the city pension funds of London and New York to engage with two of the larger affiliated pension funds of City employees on their divest/invest approaches. The exchange demonstrated that the affiliated pension funds are considerably far along the environmental, social and governance (ESG) journey, and that they are open to the ongoing sharing of information regarding investments that have poor ESG (specifically carbon) records, so as to help reduce holdings in these investments.

The investigation into special rating areas as a possible mechanism to fund the City's climate change response remained on hold in the past year; however, work got under way to initiate a desktop study on this topic in conjunction with graduate students from Harvard. Actions relating to the use of insurance products as a mechanism for climate adaptation have also remained on hold. Based on previous research, it was determined that future implementation of this action should focus on working with the City's insurance providers to better quantify insurance risk exposure to climate-change-related events, and to determine whether new or different insurance products are required to address any increased risk exposure. However, a related study in 2023/24 by a research fellow from Howden, a global insurance group that specialises in innovative products, examined the cost of flooding in informal settlements – not only to the City and its non-governmental partners, but also to the residents and businesses affected by such flood events. The scope of work included an assessment of the possible use of innovative insurance products. The results of the study will be available in 2024/25.

PROGRESS INDICATORS

GOAL 30: Investigate sources of climate finance and the use of innovative financial mechanisms to support climate change response, and implement where feasible

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Innovative financial mechanisms are implemented where feasible, and the City receives climate finance on an ongoing basis	Approximate rand value of climate-change-related funding or finance received from external sources per year (including technical assistance, grants and loans)	New indicator	Technical assistance to the value of approximately R7,1 million, in addition to technical assistance of undisclosed amounts from the C40 Cities Finance Facility and UK PACT Skills Share*	Technical assistance to the value of approximately R9,9 million, in addition to technical assistance of an undisclosed amount from the C40 Cities Finance Facility*

* Undisclosed due to funders' confidentiality requirements.

GOAL 31: Use financial mechanisms, including business models, tariffs, investment and divestment, to respond to climate change impacts and mitigation opportunities

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Financial mechanisms are in place to respond to climate change impacts and opportunities	Number of financial mechanisms in place to respond to climate change	New indicator	One (divestment from carbon-intensive investments included in Cash Management and Investment Policy)	One (divestment from carbon-intensive investments included in Cash Management and Investment Policy)



The Water Research Commission alternative sanitation pilot includes grant support to the City from the Bill and Melinda Gates Foundation.

CROSS-CUTTING WORK AREA 4: COMMUNICATION, COLLABORATION AND SKILLS DEVELOPMENT

OVERVIEW

Collaborative climate action across sectors, governments and stakeholder groups – including communities – is key to accelerate progress towards global and local climate change goals. Crucial to this approach is the development of appropriate skills across organisations to enhance planning and implementation, as well as ensuring access to effective climate-change-focused communications platforms and tools that build knowledge, create awareness and increase preparedness.

Reporting on this CCWA covers three goals:

- ✓ **Goal 32:** Ensure that Cape Town's residents, businesses, visitors and City officials receive timely, effective and appropriate climate change education, communication and training
- ✓ **Goal 33:** Establish and maintain partnerships with local, regional and international organisations to support climate actions
- ✓ **Goal 34:** Work with national government to collaboratively reform or devolve decision-making to support inclusive climate change action



Waste-related awareness raising in action under the City's Let's ACT citizen action communication and Smart Living campaigns.

PROGRESS IN 2023/24

The City continues to implement various communication and awareness initiatives relating to climate change action, including through its Let's ACT citizen action communication campaign as well as the Smart Living campaign. The latter promotes resource-efficient and sustainable behavioural change; the former serves as the City's 'umbrella' campaign and communication tool to enable and inform residents, communities, businesses and organisations to take action for a stronger, healthier and more resilient Cape Town for all.

In 2023/24, the Let's ACT transversal working group – co-chaired by the Communication and Risk and Resilience departments – continued to meet in an effort to enhance the coordination of campaigning activities across relevant departments. A number of resilience-related campaigns were implemented, including one on heat, winter energy efficiency and various waste-related Mayoral campaigns, as well as ongoing activations of the My Clean Green Home exhibit (Cape Town's first net-zero carbon show home). The Disaster Risk Management Centre continued to issue early warnings of extreme weather events through press releases and community WhatsApp groups in collaboration with the SAWS and the City's Corporate Communication Department.

In terms of knowledge and skills development, the City continues to update various resources, especially in the energy sector. Noteworthy internal capacity development in the reporting year included training developed with support from the C40 Cities Finance Facility for professionals working on green infrastructure programmes, as well as for building inspectors to update them on the new national energy-efficiency building regulations. Smart Office and SmartFacility training was also offered to facility managers. Cross-departmental coordination to share best practices and discuss proposals to reach Citywide alignment regarding green attributes tracking and allocation commenced in the past year. There has also been further progress in enhancing the City's GHG inventory and modelling capacity, which has expanded the base of technical skills and tools available. More broadly, the integration of resilience into the City's leadership development programme as well as project managers' training is ongoing, and Smart Living training aimed at City staff continues.

The City actively collaborates with local and international stakeholders and participates in various platforms/networks. This includes building on the progress and outcomes of previous and current C40 support programmes, having shifted to implementation, monitoring and evaluation relating to the City's CCAP. In 2023/24, the City continued to play an active role in platforms hosted by C40 and SALGA, where South African C40 member cities make joint or facilitated inputs. This includes various exchanges with the PCC on municipalities, the Just Energy Transition Implementation Plan, and the implications of the Climate Change Act. In addition, the City is participating in a C40 project focused on energy transition in South African cities. The project seeks to support the five South African C40 member cities of Cape Town, Johannesburg, Durban, Ekurhuleni and Tshwane, and involves a peer-to-peer learning component.

Other climate-related membership participation activities include ongoing engagement in the WWF-led South Africa Alliance for Climate Action (including contributing to the Sustainable Transport Hub), the ICLEI CitiesWithNature Action Platform, and the ICLEI Africa urban systems workstream focusing on the theme of circular economy and improving food systems. The City also serves as a role-model city in the United Nations Environment Programme (UNEP) #GenerationRestoration project (2023–25) in association with ICLEI. #GenerationRestoration is aimed at promoting biodiversity restoration at scale, particularly in urban areas, as a contribution to the UN Decade on Ecosystem Restoration as well as the Global Biodiversity Framework – see CCWA 5 for more.

City-hosted climate-change-related awareness events include commemorations of the International Labour Organisation's World Day for Safety and Health at Work (28 April) and the United Nations' International Day for Disaster Risk Reduction (13 October), both of which had climate change as a theme. Additionally, the

City presented Let's Talk sessions on heat risk in Cape Town, while engagements through the Open Space Working Group and the Energy, Water and Waste Forum continued.

Finally, the City continued its collaboration with the Economic Development Partnership (EDP) to explore ways of enabling meaningful engagement with civil-society organisations (CSOs) around mutually beneficial areas of the CCAP, and to co-create an enabling environment for CSO and community action. In this regard, the EDP helped the City engage with CSOs through a series of three workshops in the second half of 2023 with a view to establishing a joint programme of action and a partnering platform.

PROGRESS INDICATORS

GOAL 32: Ensure that Cape Town's residents, businesses, visitors and City officials receive timely, effective and appropriate climate change education, communication and training				
Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Cape Town's residents, businesses, visitors and City officials are informed and capacitated to implement climate action and contribute to the City's climate response	Number of climate-change-related communication products developed	New indicator	Four main initiatives (under Let's ACT climate-change-related campaign): • Social media and limited radio campaign on winter energy savings • Establishment of transversal committee to drive Let's ACT communication in future • Mass neighbourhood watch presentation on load-shedding at high stages, as well as household energy-saving tips • Mayoral launch of the City's anti-litter mascot, Bingo	Five main initiatives: • Let's ACT transversal work group for communication ongoing • Let's ACT-related campaigns under development, including Protect Your Power • Climate change co-benefit campaign, Beat the Heat, going live in December 2024 • Series of resources developed in partnership with GreenCape to promote Cape Town as a leading African city in the field of climate responsiveness through its commitment to building resilience and growing green economy opportunities • Intranet page with key City climate response info and documents created, along with climate change newsletter series for staff

	Number of climate-change-related events held per annum (under CCAP banner)	New indicator	Six events: • 2 engagements with CSOs on CCAP implementation • 1 global Clean Energy Network and Finance Academy workshop, co-hosted with C40 • 3 climate-related Open Space Working Group meetings (open space and water; lessons from the High Line in New York City; lessons from Medellin)	12 events: • 3 engagements with CSOs (via EDP) on CCAP implementation (Sep 2023 on joint programme of action; Oct 2023 on City's Heat Action Plan; Nov 2023 on a collaboration concept note and planning for 2024) • International Labour Organisation's World Day for Safety and Health at Work (May 2024) • United Nations' International Day for Disaster Risk Reduction (Oct 2023) • 2 Let's Talk sessions about heat risk in Cape Town (Dec 2023 and Feb 2024) • 2 Open Space Working Group sessions (Oct 2023 on design and precinct management in the success of open spaces; Mar 2024 on Green Point Urban Park) • 3 Energy, Water and Waste Forum sessions (Nov 2023 on water resilience; Apr 2024 on waste; June 2024 on energy)
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GOAL 33: Establish and maintain partnerships with local, regional and international organisations to support climate actions

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Enhanced knowledge exchange and collaboration with local, regional and international organisations on climate actions	Whether a platform has been developed and activated to periodically engage external stakeholders on climate actions	New indicator	Completed EDP-supported project aimed at exploring the development of an engagement platform, and plans in place to formally set up the platform with EDP as lead convener	Platform developed, but not fully operational yet. More than three engagements held with CSOs, but funding to maintain EDP's facilitation role has not been secured.

CROSS-CUTTING WORK AREA 5: PROMOTE, PROTECT AND ENHANCE HUMAN AND ECOSYSTEM HEALTH

OVERVIEW

Climate change significantly affects human health and wellbeing through the direct and indirect impact from different shocks and stressors, such as fires, extreme heat, air and water quality, and food access and availability. The interrelationship between these different shocks and stressors calls for a cross-departmental approach to managing the impact of climate change, the environment as well as human health.

Reporting on this CCWA covers three goals:

- ✓ **Goal 35:** Develop and implement a green infrastructure programme that supports climate change response, protects biodiversity, and enhances ecosystem goods and services
- ✓ **Goal 36:** Ensure that physical health and mental wellbeing are addressed through the City's climate change response
- ✓ **Goal 37:** Promote food security as well as low-carbon and climate-resilient food systems in Cape Town

PROGRESS IN 2023/24

In recognition of the City's efforts towards the implementation of nature-based solutions such as biodiversity management and green infrastructure initiatives, UNEP selected Cape Town as one of ten #GenerationRestoration role-model cities, and the only one in Africa. The aim of the programme is to build capacity and share lessons and best practice around nature-based solutions for cities around the world that are embarking on integrating these solutions into their urban planning.

Moreover, the City continued implementing its Bioregional Plan, Biodiversity Network (BioNet) and Local Biodiversity Strategy and Action Plan (LBSAP). Currently, 55 477 ha of land in Cape Town is managed for conservation, which represents 65,27% of the baseline 2009 BioNet. The June 2024 target to conserve 65,25% of the BioNet was met, with a June 2027 target of 65,80%. Key developments in this work area include ongoing development facilitation through land banking and other offsets, and the reorganising and updating of the integrated reserve management plans into protected area management plans.

In addition, the BioNet GIS model re-run was incorporated into a revised Draft Bioregional Plan, which is currently undergoing the required Council process for adoption, with public participation planned for 2024/25. The updated policy will be called the Cape Town Biodiversity Spatial Plan 2024 to align with the Western Cape Biodiversity Act, 2021.

The implementation of the green infrastructure programme progressed, including the review of the Green Infrastructure Network (GINet) to incorporate spatial and contextual changes, as well as refine the mapping. In addition to ongoing efforts to integrate green infrastructure approaches and principles into strategies, policies and regulatory frameworks, work on a 'key considerations' document is under way to support the GINet and provide insights into the most important aspects that should be considered when a development activity is proposed or undertaken.



In the past year, the City adopted its second-generation Air Quality Management Plan (AQMP), with objectives and activities that align with the City's Climate Change Strategy and Action Plan. The City also continues to enforce its Air Quality Management By-law and has embarked on an information technology modernisation project to facilitate online processes for applications under the by-law. An internal audit of the first-generation AQMP was conducted between February and June 2024, with the findings demonstrating compliance with the goals, objectives and activities that the plan had set out to achieve.

The Mayor's priority programme on water quality continued to be implemented in the reporting year, replacing the water quality improvement programme initiated in 2021. The priority programme comprises projects such as the completed upgrade to the Zandvliet wastewater treatment works (WWTW), the ongoing Potsdam WWTW upgrade, as well as the Macassar WWTW upgrade, which is currently in the procurement stage. The programme also covers improved maintenance practices, including the replacement of 78,2 km of sewers by the end of May 2024, and the inspection of 181 km of sewers for stormwater-sewer cross connections. Other programme activities that took place in 2023/24 include the installation of uninterruptible power supplies at 27 pump stations, the initiation of the detail design for the Langevlei and Sand River canal upgrades, and the update to the Zandvlei Estuary Mouth Management Plan. In addition, the Milnerton lagoon dredging project moved into the detail design phase, and the trial aeration technology to improve water quality in the lagoon was completed.

A highlight for the food systems programme in the year in review was to be shortlisted for the prestigious Guangzhou International Award for Urban Innovation, which helped enhance the City's profile as a global leader in innovation and food systems. The programme also featured as a key sustainability initiative in the 2023 edition of the Mayor's Portfolio of Urban Sustainability. Important advancements made in this work area include the development of the State of the City Food System report through the AfriFOODLinks project, and the signing of a food system memorandum of understanding with the Consumer Goods Council of South Africa (CGCSA). This agreement will enable improved collaboration to develop protocols to mitigate any material risk to the food system and food economy in Cape Town. Other work under the food systems programme involved the continuing convening of the Food Systems Working Group, the Food Systems Research Community of Practice, and the Food Indaba. The Food Indaba, which is an internal work group, covered topics such as the urban sustainability pilot project, the possible impacts of stage 8 load-shedding, and the impacts of the taxi strike on Cape Town's food system.

The Disaster Risk Management Centre continued to implement various disaster risk education and awareness programmes relating to a range of climate-related hazards. The aim of these programmes is to build resilience, with a focus on safety and preparedness for vulnerable groups and communities. The programme offering includes the Fire Wise and Flood Wise campaigns, a climate change programme in schools, heatwave awareness, a women and girls resilience programme, and community-based risk assessment workshops. In the past year, 18 community-based risk assessment workshops were held, which included a component on the neighbourhood resilience assessment to further help communities develop action plans to build resilience in their respective areas.

PROGRESS INDICATORS

GOAL 35: Develop and implement a green infrastructure programme that supports climate change response, protects biodiversity, and enhances ecosystem goods and services					
Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
Improved resilience of biodiversity and ecosystem goods and services	Number of City policies and strategic documents that incorporates references to green infrastructure considerations	1	N/A	18*	27
	Proportion of biodiversity priority areas protected	65,44%	65,25%	65,14%	65,27%

* Indicates the cumulative number of City policies and strategic documents that incorporated references to green infrastructure considerations between July 2020 and June 2023. The indicator is being reported as a cumulative number since June 2023.

GOAL 36: Ensure that physical health and mental wellbeing are addressed through the City's climate change response

Medium-term outcome	Indicator name	Baseline	Target	Update as of 30 June 2023	Update as of 30 June 2024
The City's climate change response addresses physical health and mental wellbeing	Percentage river and vlei samples with E. coli count $\leq 4\ 000$ CFU/100 ml	55,5%	60%	57,4%	57%
	Number of days when air pollution exceeds RSA ambient air quality standards	9	≤ 68	44*	18

*Emissions from local hot-food vendors on the fence line of one of the monitoring sites skewed data and influenced the overall results.

GOAL 37: Promote food security as well as low-carbon and climate-resilient food systems in Cape Town

Medium-term outcome	Indicator name	Baseline	Update as of 30 June 2023	Update as of 30 June 2024
Food security is enhanced and low-carbon and climate-resilient food systems are promoted in Cape Town	Number of initiatives implemented as part of the food systems programme	0	13 initiatives • 5 Food Systems Working Group meetings • 2 Food Systems Research Community of Practice meetings • Stage 8 load-shedding scenario development • Collaboration with ICLEI Africa and a number of other partners in AfriFOODLinks • Food systems market study • Food Dialogues event on mother and child nutrition • Food gardens and heat mitigation study	9 initiatives • 4 Food Systems Working Group meetings • 1 Food Indaba meeting • 2 Food Systems Research Community of Practice meetings • Collaboration with ICLEI Africa and a number of other partners in AfriFOODLinks • Memorandum of understanding with CGCSA, and ongoing engagement



The City's Food Systems Programme continues to advance in a number of work areas.



CLIMATE LEADERSHIP REVIEW ACTIONS

OVERVIEW

Four actions of the CCAP have been identified as “climate leadership review actions”, which are actions that target important strategic areas that need to be pursued by multiple departments or through multistakeholder collaboration. These actions are located in highly transversal areas where it is important for the City to lead as an organisation.

At the same time, the CCAP recognises the City’s strong sector centres-of-expertise (line departments), within which climate change is well mainstreamed. The institutional structures also include a number of transversal competencies that coordinate action in response to challenges. The climate leadership review actions, therefore, aim to assess the state of climate leadership through a periodic qualitative and quantitative review of relevant service delivery programmes’ contribution to climate goals, while also supporting these programmes by identifying any gaps and recommending support where needed.

Triennial assessments of these actions aim to:

- ✓ reflect how sector programmes fit into the bigger picture of the City’s climate change response;
- ✓ discover and communicate how sectors can learn from one another;
- ✓ identify any gaps where sector teams need support or capacity-building, or identify structural challenges hindering implementation; and
- ✓ communicate how gaps or challenges might be addressed in separate sets of recommendations to the political and administrative leadership.

The four climate leadership review actions cover a broad range of activities that involve numerous different actors and institutions, including all three spheres of government, the private sector as well as civil-society organisations.



ACTION 28.2: PROMOTE THE DEVELOPMENT OF SOUTH AFRICAN GREEN PRODUCTS AND SERVICES TO INCREASE LOCAL DEMAND AND SUPPLY

Overview of current status

The City plays a key part in driving the demand and supply of South African green products and services through establishing and promoting Cape Town as the country's hub for green innovation, technology and skills. To create an environment that encourages new investments and the creation of new enterprises in the local economy, including the local green economy, the City partners with special-purpose vehicles (SPVs) and Wesgro (the Western Cape Tourism, Trade and Investment Promotion Agency). SPVs such as GreenCape support the City in developing its green economy by producing case studies, industry briefs and market intelligence reports, and by assisting City departments in areas such as circular economy businesses, the waste economy, green procurement, renewable energy, and energy efficiency.



City supporting green economy sectors such as Black Soldier Fly farming which supports waste diversion and local animal feed production.

Through SPVs' support, international engagements, business and industry events, and tools such as the Invest Cape Town website, the City showcases itself as a destination where international and local investors and start-ups can invest in various green initiatives and green economy infrastructure. The focus is on renewable energy, sustainable manufacturing, recycling technologies, and innovative waste solutions. The City prioritises the green economy business narrative by creating an enabling environment through its strategies, policies and plans. These include the Energy Strategy, which promotes renewable energy and energy efficiency across all sectors; the Draft Waste Strategy, which is informed by circular economy approaches; the Investment Incentives Policy; and the Green Procurement Action Plan.

In addition, the City enables and encourages increased resource efficiency through proactive outreach activities and access to data aimed at residents, businesses and partners across different sectors. These initiatives include the Open Data Portal, the Energy, Water and Waste Forum, and public education and awareness programmes for residents and businesses on water conservation, waste reduction and energy efficiency.

Finally, in the context of a globalised economy, quality assurance labels supported by reputable verification agencies – also known as eco-labels – can support the uptake of green products and services by providing consumers with the confidence that they are making sustainable choices. Currently, there is no eco-label that specifically focuses on carbon emissions or the carbon intensity of products in South Africa. Therefore, it is likely that more specialist eco-labels – such as those for the building industry – will emerge.

Recommendation

A number of activities under this action are already being carried out by GreenCape and Wesgro, either in partnership with the City or independently, specifically those that promote Cape Town as an investment destination for green products and services, as well as facilitate circular economy activities. GreenCape also helped the City develop a green investment pitchbook to promote the administration's green credentials. All of these activities however could be accommodated as sub-actions of the other actions under goal 28 (Advance the local green products and services market, and reduce the risks of climate impacts on local economic development), obviating the need for a separate action. The one assessment area that is not covered under any other action in the CCAP is the area relating to eco-labels. However, the review process has shown that there are a number of different eco-labels in use across South Africa, each governed by a different entity, including those that are internationally recognised and governed. As such, it is unlikely that the design of a unified eco-label for carbon intensity would be feasible, given the broad range of products and services it would have to cover.

As such, it is recommended that action 28.2 be removed from the CCAP, and that the activities that could be accommodated under the other actions of goal 28 be included in those.

ACTION 31.1: CONSIDER CLIMATE CHANGE IMPACTS AND OPPORTUNITIES IN THE CITY'S BUSINESS, REVENUE AND OPERATIONAL MODEL

Overview of current status

Municipal revenue remains under pressure countrywide due to the same factors that have been consistently identified since the drafting of this action in 2021. Higher stages of load-shedding had a significant impact on electricity sales and, therefore, on revenue. Subsequent to the significant reduction in load-shedding in 2024, sales bounced back, but have not yet returned to previous levels of demand. This indicates that some interventions put in place in response to load-shedding – particularly the installation of SSEG and energy-efficiency retrofits – have permanently reduced demand.

The City has established an energy finance task team, who meets regularly. The team has recently commissioned a study to model potential financial scenarios for the City's energy utility function. The study identified pressures on the City's financial model linked to green energy, particularly SSEG and wheeling. Although the impact is currently limited, sales have decreased over time as embedded generation and wheeling has increased, and most scenarios show that this will continue to have a negative revenue impact in future.

Utility reform: Utility reform has been included as one of the enablers in the City's 2023 Energy Strategy. Enabler A, "Operate a future-fit utility business", is aligned with the CCAP's goal 13 (Get technologically and commercially ready to operate the metropolitan distribution grid of the future). In this work area, four programmes have been identified:

- ✓ Institutional and workforce reform, focused on unbundling the City's three functions of generation, distribution and retail within an appropriate institutional structure
- ✓ Tariff and financial reform, focused on creating a financially sustainable electricity utility that encourages private-sector participation, while safeguarding the provision of subsidised services to indigent households
- ✓ Infrastructure and technology reform, focused on enhancing utility operations through modernising and maintaining infrastructure and leveraging digital technologies
- ✓ City-level energy planning, focused on enhancing localised planning relating to energy supply, demand forecasting and infrastructure capacity assessments to inform decisions

As of 2024, approximately half of Cape Town's minimum load was being met by embedded generation, and a distributed energy resource management system is being developed for implementation to ensure that impacts of embedded generation are managed properly. However, uncertainty around electricity regulation reforms at the national level, particularly with regard to the distribution sector, creates risk for the City, as it is difficult to make decisions without clarity on the sector's regulatory future.

Operating models: Consideration of climate risks in the City's operating models has become increasingly mainstreamed through the evolution of the City's Business Continuity Management (BCM) function in recent years. The BCM function is steadily mainstreaming the development of business continuity planning for the infrastructure-related impacts of climate hazards. This is supplemented by detailed climate risk assessments carried out by the Climate Change Planning function.

Recommendation

This is a complex area that requires further monitoring. However, some aspects of this action can be considered to be implemented, while others are best dealt with under other actions of the CCAP. Tariff and social support has been made more transparent through the improved publication and explanation of the City's tariff policies. Issues relating to data management and the use of academic data would best be covered under goal 27 of the CCAP (Conduct and commission climate-change-related research, and ensure that the City remains up to date with emerging research in the field); therefore, these components of action 31.1 should be reformulated and included there in future versions of the CCAP. The use of sectoral hazard, vulnerability and risk assessments should either be included under action 27.1 or formulated as a new action under goal 27. Consideration of climate change impacts in the City's infrastructure strategy and project pipeline has been mainstreamed through the sector planning and project management processes. This aspect can be reported on under actions 26.1 and 26.3 of the CCAP.

The remaining components concerning the use of requests for information (RFIs) and the legal, regulatory and governance approaches in relation to the City's business and operating models should be consolidated into a new action under goal 31 (Use financial mechanisms, including business models, tariffs, investment and divestment, to respond to climate change impacts and mitigation opportunities). The identification of a lead department will be key to ensuring that this action moves forward.



ACTION 34.1: SUPPORT GOVERNMENT ENTITIES ACROSS ALL TIERS TO REFORM AND IMPROVE STATE ENTERPRISES AND PLANNING FUNCTIONS IN KEY SECTORS SUCH AS ELECTRICITY, TRANSPORT AND WATER

Overview of current status

To achieve the overall goals set out in its IDP, the City continues to be a strong advocate for critical national reforms in the key sectors of energy, transport and water, as well as the devolution of certain powers and responsibilities to capable metros. The City's current IDP 2022–2027, adopted since the drafting of the CCAP, includes a dedicated programme titled "Advocacy and intergovernmental relations" (programme 16.6), with the following focus areas:

- ✓ Collaborate with government and enterprises for infrastructure
- ✓ Engage with national government for service delivery
- ✓ Advocate for more local power in electricity, policing and transport
- ✓ Prioritise international partnerships for the five-year IDP

More recently, in July 2024, Cape Town Mayor Geordin Hill-Lewis outlined Cape Town's advocacy agenda for the new Government of National Unity in an address to Council. The top advocacy priorities include the devolution of passenger rail to the City, and cutting red tape to unleash economic growth. The City's Mayoral Committee member for Energy, Cllr Xanthea Limberg, also serves on the SALGA National Executive Committee, which advocates for key legislative reforms in the local government sector in areas such as water management, electricity, disaster management, and local government funding.

At a policy level, the City's 2023 Energy Strategy includes a specific programme relating to energy system advocacy and intergovernmental collaboration. The programme stems from the recognition that there are many external decision-makers and stakeholders who could potentially influence how the City implements its Energy Strategy, including state-owned entities such as Eskom, national regulators such as NERSA, and provincial and national government. The programme involves advocacy to empower the City to contribute meaningfully to South Africa's energy security, including increasing the City's mandate as a metropolitan municipality to have greater self-determination with regard to Cape Town's future energy system, where appropriate and necessary.

In the transport sector, a key intergovernmental advocacy priority has been the devolution of rail, acknowledging the critical role of a functioning rail system in Cape Town's transport network. For the past two to three years, a project has been under way to investigate the feasibility, risk and implications of including urban passenger rail under the City's public transport function. By the end of 2024, the Cape Town rail feasibility study was completed and adopted by Council. The comprehensive study proposes three potential ownership models for Cape Town's passenger rail service. The analysis will be crucial in shaping the future structure and management of Cape Town's urban rail system, ensuring that passenger rail supports the City's transport and economic recovery goals. The key finding of the study is that the City should be in control of

rail to ensure a fully functional and efficient service in line with the administration's constitutional mandate of providing an integrated public transport system. Engagements with PRASA and relevant rail stakeholders also continue through relevant committees, and the City has finalised a service-level plan with PRASA to define the roles and responsibilities for the future management and operation of urban rail services. Finally, the Intermodal Planning Committee, established by the City in accordance with the National Land Transport Act, remains intact with the purpose of coordinating and integrating land-based transport modes (public, private, freight and non-motorised transport modes) between all relevant stakeholders and in line with what is stipulated in the City's Comprehensive Integrated Transport Plan and the Integrated Public Transport Network Plan.

Collaboration in the water sector includes the City's continued work with the national Department of Water and Sanitation and other stakeholders to improve management of the Western Cape water supply system, recognising the importance of both intergovernmental cooperation and sustainable catchment management for water resilience.

Recommendation

Intergovernmental collaboration, engagement and advocacy in the key sectors identified under this action is a complex field that remains important to monitor in a Citywide climate change response action plan. This is particularly true for matters that affect the City's ability to deliver the level of ambition required by its climate change response goals, and that are also priorities in the IDP.

Advocacy in the energy sector is now covered to some extent through a dedicated energy system advocacy and intergovernmental collaboration programme in the 2023 Energy Strategy. Future reporting in this regard is anticipated to take place via implementation review reports of the Energy Strategy. Current key challenges are the impact of the Electricity Regulation Amendment Act of 2024, and limited access to Eskom distribution data for future energy and GHG emissions data outputs.

In the transport sector, significant progress has been made in engaging with PRASA on the devolution of rail, which is sufficiently covered by actions 18.1 and 18.2. Work towards establishing rail precincts as high-functioning integration zones is increasingly integrated into the work of the Urban Regeneration Department (formerly Urban Catalytic Investment) and is further reported on under action 10.3. Information on the state of the national, regional and local evidence-based policy dialogue on pressing transport issues such as utility oversight, transport subsidies and intermodal integration requires more in-depth engagement in future assessments of this action.

Transparent communication and data-sharing is gaining momentum through work to expand data-sharing via the City's Open Data Portal and the implementation of the new Data-Sharing Strategy (2023). While community-facing City utility units have made significant progress in engaging the public, this remains a crucial area of attention under the CCAP and for the current administration, particularly in the energy and water sectors. While some of the CCAP actions include elements of this, combined assessment of progress across the sectors could remain as a key feature under this action. Therefore, it is recommended that this action be reformulated in future versions of the CCAP to home in on those components that are not adequately accounted for under other CCAP actions.

ACTION 36.4: ENSURE THAT MENTAL HEALTH IS ADEQUATELY ADDRESSED AS PART OF THE CITY'S CLIMATE CHANGE RESPONSE

Overview of current status

The City is currently not implementing a programme with a direct focus on climate change and mental health due to the complexity of the subject as well as uncertainty about local government's future role in administering mental health care. Nevertheless, initiatives addressing the topic through indirect co-benefits of existing programmes are described below.

To address the lack of data available on the link between climate change and mental health, long-term research programmes such as the University of Cape Town's Heat Adaptation Benefits for Vulnerable Groups in Africa (HABVIA) project and Cascading Climate and Health Risks in African Cities (CASCADE) are gathering high-quality cohort data on physiological and mental health alongside climate, environmental and socioeconomic information. This programme aims to advance Africa's (and South Africa's) response to urban climate and health risks, and address evidence gaps.

The City's Resilience Strategy is addressing mental health by expanding the mental health training programme to focus on primary health clinics and lay counsellors. This provides an opportunity to investigate opportunities for climate change integration.

Communication and outreach initiatives indirectly consider the sensitive link between climate change and mental health by providing platforms for communities to share their experiences of social challenges, climate hazards and the challenges of adaptation, and collectively decide on a course of action. Examples of such initiatives include:

- ✓ the community risk assessment workshops facilitated by Disaster Risk Management, and the neighbourhood resilience assessment workshops facilitated by Risk and Resilience; and
- ✓ workshops organised and facilitated by civil-society organisations working on climate change in vulnerable communities across Cape Town.

In terms of communication, climate-change-focused information sessions led by Disaster Risk Management are also customised to ensure that no particular audience is overwhelmed or negatively affected by the information. In addition to lessons learnt from the Covid-19 and Day Zero response communication campaigns, the City's climate change perception study (2020) also aimed to inform climate change communication by exploring public understanding of climate change, contributors to behavioural change, and responses to climate-change-related communication concepts.

Recommendation

While this action is an important focus area, its conceptual development requires strategic planning, as implementation depends on a multistakeholder approach that combines climate change and mental health expertise. As mental health is currently a shared function between local and provincial government, uncertainty with regard to the City's mandate and role in leading implementation creates further challenges and complicates the initiation of a programme. More work is required to determine the best approach to identify the action owner, stakeholders, and the components required for an enabling environment. Therefore, it is recommended that this action be either reformulated or removed from future versions of the CCAP, depending on whether certainty is reached about the City's future role in the delivery of mental healthcare services.



CONCLUSION

This report is the third report-back on progress made towards the implementation of the CCAP. Slow yet sustained progress continues to be made in moving actions into more advanced stages of implementation. As of 2023/24, 58 out of the 101 actions were actively being implemented, 19 were in a phase of expansion of an existing programme (e.g. scaling up from a pilot phase), and two were completed. Therefore, a total of 79 actions, or approximately 78%, had moved beyond the planning and conceptualisation stage.

Importantly, although some actions have not been reported as having moved to a more advanced stage of work, progress still occurred. For many large and complex actions, the planning phase can take a number of years to complete. Therefore, where an action status has not changed, this does not imply a lack of progress. In addition, many complex actions that encompass ongoing programmes are anticipated to remain at the implementation stage for the foreseeable future; they, too, should not be viewed as stagnant.

At the same time, actions that have not yet shown any progress have been noted. An evaluation to be carried out in 2024/25 will focus on the challenges identified by action owners as impeding their ability to move actions forward. This evaluation will help the City identify where additional support is required to advance certain actions, including applying for technical assistance and grant funding.

As noted in the previous report, some actions in the CCAP need to be reviewed and updated in a future version of the plan, for the following reasons:

- ✓ A small number of actions were originally written with the intent of further investigating options for implementation. However, initial investigative work has shown that certain implementation mechanisms may not be possible or are not currently appropriate for Cape Town's context. Consequently, these actions need to be revised to incorporate the results of the initial investigations.
- ✓ Significant policy changes have occurred in a number of areas since the CCAP was approved, most notably in the energy sector. Therefore, some actions will need to be re-evaluated and possibly reformulated to ensure that they remain up to date and responsive to current conditions.
- ✓ Some indicators that were drafted to measure medium-term outcomes at the goal level need to be revised to ensure more effective and consistent measurement of these outcomes, particularly for indicators that are affected by external events such as weather conditions.

The review mentioned above was initiated in 2023/24 and will be concluded in 2024/25.

This report on each SFA and CCWA provides an overall assessment of the state of implementation of the different work areas, noting some key successes. A high-level assessment of the goal-level indicators shows that progress is occurring and points to a generally positive trend. As the CCAP moves into a stage of longer-term implementation, it will be possible in future years to conduct a more detailed analysis of implementation trends and identify gaps and areas of concern.

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ANNEXURES

ANNEXURE A: LIST OF CCAP ACTIONS WITH CHANGE IN STATUS OVER TIME

SFAs and CCWAs (Thematic Areas)	Goals (Linked Goals)	Actions (Activities)	Action Status (CCAP 2021)	Action Status (2021/22)	Action Status (2022/23)	Action Status (2023/24)
SFA 1: Urban cooling and heat responsiveness	Goal 1: Reduce immediate risks to health during heat waves and high heat days	Action 1.1: Draft and implement a heatwave and high-heat day action plan and standard operating procedure (SOP)	New (in planning)	Implementation	Implementation	Implementation
		Action 1.2: Develop and implement a network of cooling centres	New (concept)	New (in planning)	New (in planning)	New (in planning)
		Action 1.3: Develop and implement an early-warning and real-time monitoring system for heat	New (concept)	New (concept)	New (in planning)	New (in planning)
	Goal 2: Proactively reduce heat impacts on the city through urban greening	Action 2.1: Devise and implement a focused tree-planting programme to reduce the heat island effect and provide shading	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
		Action 2.2: Devise and implement an urban greening programme to reduce the heat island effect	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
		Action 3.1: Continued implementation of the City's water conservation programme focused on demand-side management	Implementation	Implementation	Implementation	Implementation
SFA 2: Water security and drought readiness	Goal 3: Reduce demand for water to protect water resources and ensure sustainability of supply	Action 4.1: Augment Cape Town's water supply to ensure the long-term sustainability of supply	Implementation	Implementation	Implementation	Implementation
		Action 4.2: Remove invasive alien plant species in water supply catchment areas and aquifer recharge areas, and in natural areas across the city	Implementation	Implementation	Implementation	Implementation
	Goal 5: Proactively reduce flood risk through the implementation of a water-sensitive city strategy or plan	Action 5.1: Develop and implement a water-sensitive city strategy or plan for Cape Town	New (in planning)	New (in planning)	New (in planning)	New (in planning)
		Action 5.2: Restore and rehabilitate the City's rivers and wetlands to create liveable urban waterways	New (in planning)	Implementation	Implementation	Implementation
SFA 3: Water sensitivity, flood readiness and storm management	Goal 6: Take action to reduce flood risk and storm damage through disaster mitigation approaches	Action 6.1: Improve the City's ability to address flood risk through improved flood-risk mapping and the implementation of early-warning systems	New (in planning)	New (in planning)	New (in planning)	Implementation
		Action 6.2: Continued implementation of the City's Winter Readiness Plan, and expansion/scaling up where required	Implementation	Implementation	Implementation	Implementation

SFA 4: Coastal management and resilience	Goal 7: Promote coastal resilience for the benefit of both coastal communities and coastal ecosystems	Action 7.1: Initiate a process to ensure that coastal communities and ecosystems are resilient to the impacts of climate-change-induced coastal pressures such as sea-level rise and coastal erosion	New (in planning)	New (in planning)	New (in planning)	New (in planning)
		Action 7.2: Initiate the planning, development and execution of a coastal and sea-defence decision framework for Cape Town	New (in planning)	New (in planning)	New (in planning)	New (in planning)
		Action 7.3: On an ongoing basis, conduct necessary transdisciplinary research related to sea-level rise and other climate-change-induced coastal pressures and hazards as the baseline informant to respond appropriately to such risks in the coastal zone	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
		Action 7.4: On an ongoing basis, conduct necessary legal reviews and research, and put in place appropriate regulations to address the complex legal challenges surrounding property ownership and liability in the context of a receding coastline and risk exposure, respectively	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
SFA 5: Managing fire risk and responsiveness	Goal 8: Put in place effective cooperative and empowering mechanisms for addressing complex coastal management issues in the context of climate change	Action 8.1: Put in place cooperative and collaborative mechanisms for addressing complex coastal management issues, including climate change, which engage the public, businesses and other spheres of government, and ensure interdepartmental collaboration in the City on an 'as and when required' basis	Expansion of existing programme	On hold	On hold	On hold
		Action 9.1: Reduce urban fire risk and the impact of urban fires on communities	Implementation	Implementation	Implementation	Implementation
		Action 9.2: Design and implement a programme and incentives for affordable, safe energy solutions for low-income and informal households	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
SFA 6: Spatial planning and resource inclusivity	Goal 9: Proactively reduce fire risk and the impact of fires on communities and natural areas	Action 9.3: Reduce wildfire risk and the impact of wildfires on urban communities	Implementation	Implementation	Implementation	Implementation
		Action 10.1: Ensure that the Municipal Spatial Development Framework (MSDF) and District Spatial Development Frameworks (DSDFs) are climate-responsive, enhance the effectiveness of the Transit-Oriented Development (TOD) Strategic Framework, and support the long-term development of inclusive, climate-resilient, zero-emissions precincts	Expansion of existing programme	Implementation	Implementation	Implementation

SFA 7: Carbon-neutral energy for work creation and economic development		Action 10.2: Promote and support integrated human settlements development that is climate-responsive	New (concept)	New (in planning)	Implementation	Implementation	Implementation
		Action 10.3: Ensure that City catalytic sites prioritise the development of mixed-use and mixed-income inclusive housing along public transport corridors, and ensure that pilot projects on urban sustainability are net-zero carbon and minimise the cost of occupancy with energy efficiency	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 11.1: Alleviate energy poverty through energy- efficiency and alternative- energy interventions, education and communication, and address barriers to accessing clean and affordable energy sources	New (in planning)	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
	Goal 11: Ensure low-income residents are climate-resilient and have equitable access to essential services	Action 12.1: Promote and administer the uptake of renewable small-scale embedded generation (SSEG) across residential, commercial and industrial sectors	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 12.2: Finalise and implement a framework and tariffs for the wheeling of renewable electricity	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 12.3: City-level energy planning that incorporates the carbon-neutral goal	New (in planning)	Implementation	Implementation	Implementation	Implementation
		Action 12.4: Develop a renewable-energy roadmap and implement as and when economically viable	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 12.5: Develop an electrical energy storage roadmap	New (in planning)	Implementation	Implementation	Implementation	Implementation
	Goal 12: Move as quickly as prices and opportunities allow towards 100% clean electricity supply by 2050	Action 12.6: Local and regional electricity transition in a framework of mutual support with national programmes	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 13.1: Invest in transitioning to the grid of the future	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 13.2: Investigate, prepare and implement a new utility business model	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 13.3: Customer relations for a liberalising market	Implementation	Completed	Completed	Completed	Completed
		Goal 13: Get technologically and commercially ready to operate the metropolitan distribution grid of the future					

SFA 8: Zero-emission buildings and precincts	Goal 14: Minimise the economic cost of energy transition through maximising energy efficiency and developing a regional value chain for carbon-neutral molecular fuels	Action 14.1: Devise and implement communication campaigns that promote energy efficiency	Implementation	Implementation	Implementation	Implementation
		Action 14.2: Unlock transition with energy data	New (in planning)	New (in planning)	Expansion of existing programme	Cancelled
		Action 14.3: Develop a regional value chain for carbon-neutral molecular fuels	New (concept)	New (concept)	New (concept)	New (concept)
	Goal 15: All new buildings (residential, commercial) to be net-zero carbon by 2030	Action 15.1: Develop and implement building energy-efficiency and renewable-energy mechanisms and relevant instruments that facilitate all new buildings (residential, commercial) to be net-zero carbon by 2030	New (in planning)	Implementation	Implementation	Implementation
		Action 15.2: Develop and implement a support programme for influencing developer and market behaviour (informed by a strong evidence base)	New (concept)	Implementation	Implementation	Implementation
		Action 15.3: Work to ensure that state-subsidised housing (including social housing, public rental housing and Breaking New Ground [BNG] housing) is energy-efficient and climate-resilient, and that low-income residents have equitable access to essential services	New (concept)	Expansion of existing programme	Expansion of existing programme	Implementation
	Goal 16: All existing residential and commercial buildings to be retrofitted with energy-efficient technologies to be net-zero carbon in operation by 2050	Action 16.1: Develop and implement innovative incentive mechanisms, which may include financing, rewards, recognition or similar, to encourage faster uptake of application to energy-efficiency and renewable-energy property upgrades	New (concept)	Implementation	Implementation	Implementation
		Action 16.2: Facilitate the development of a programme that aims to improve energy efficiency in all existing residential and commercial buildings, and facilitating the provision of renewable energy towards net-zero carbon (in operation) by 2050	New (concept)	New (in planning)	New (in planning)	New (in planning)
		Action 16.3: Develop and implement voluntary and legal instruments or mechanisms aimed at improving the resource efficiency of existing residential properties through disclosing the residential building energy and water performance to potential homebuyers and/or tenants	New (in planning)	New (in planning)	New (in planning)	New (in planning)

SFA 9: Mobility for quality of life and livelihoods	Goal 17: All existing municipal buildings (excluding industrial plants) to be net zero carbon by 2030	Action 17.1: Continue with municipal operations' energy-efficiency retrofit, energy audit, and energy and water metering programmes, aiming to optimise energy demand and operational costs across municipal facilities by 2030	Implementation	Implementation	Implementation	Implementation
		Action 17.2: Develop a programme plan to achieve net-zero carbon for all new and existing municipal buildings by 2030	New (in planning)	Implementation	Implementation	Implementation
		Action 17.3: Facilitate the uptake of Energy Performance Certificates so that all relevant municipal buildings disclose their energy consumption data	New (in planning)	Implementation	Implementation	Implementation
	Goal 18: Through the City's role as the transport planning authority as well as the contracting authority for bus rapid transit (BRT) services, support the restoration, rehabilitation and expansion of the rail system to a carrying capacity of 30% above 2010 levels by 2030, and put in place a contingency for alternative mass transit infrastructure in the event that the rail system does not recover or ceases to be functional altogether	Action 18.1: Support PRASA in restoring and rehabilitating the rail system and expanding services where possible	Implementation	Implementation	Implementation	Implementation
		Action 18.2: Develop legal, strategic and planning responses that define how the City can respond to the integrated transport planning challenge posed by the rail crisis	Implementation	Implementation	Implementation	Implementation
		Action 18.3: Explore contingencies for alternative mass transit options	New (concept)	Implementation	Implementation	Implementation
		Action 19.1: Use the Integrated Public Transport Network (IPTN) Plan 2032 and the non-motorised transport (NMT) network plans to maximise change in modal shift away from private vehicles	New (in planning)	New (in planning)	New (in planning)	New (in planning)
		Action 19.2: Fast-track high-occupancy vehicle (HOV) lanes and complete the City of Cape Town Congestion Management Plan	New (in planning)	Expansion of existing programme	Expansion of existing programme	Implementation
		Action 19.3: Ensure that pedestrianisation programmes prioritise improved safety and increase the number of pedestrian/cycling trips made	Implementation	Implementation	Implementation	Implementation
	Goal 19: Integrate transport modes to improve efficiency and fast-track a modal shift from passenger kilometres by private vehicles to other modes (decreasing from 58% in 2016 to 23% in 2050)	Action 19.4: Promote the citywide adoption of travel demand management (TDM) measures, in particular measures that support flexible working and a shift to more sustainable transport modes	New (concept)	Implementation	Implementation	Implementation

SFA 10: Circular waste economy	Goal 20: Prepare for a scenario of complete transition to electric or alternative fuel-powered freight, bus, taxi and passenger vehicles by 2050	Action 20.1: Develop a procurement strategy for low-carbon emission vehicles and fuel technologies towards carbon neutrality	New (concept)	New (in planning)	New (in planning)	New (in planning)	Implementation
		Action 20.2: Develop the necessary policy and regulatory environment to promote the uptake of electro-mobility freight and electric passenger transport (including public and private vehicles and minibus taxis) and manage risks to the electricity grid	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 20.3: Show City leadership and gather real-world data from electric vehicle (EV) pilot programmes, such as the installation of publicly accessible demonstration chargers and the procurement of EVs for the City fleet	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 21.1: Compile a baseline carbon footprint measurement for the operations of the City of Cape Town Urban Mobility, Spatial Planning and Environment, and Human Settlements directorates	Implementation	Implementation	Implementation	Implementation	Implementation
	Goal 21: Ensure that climate change and air quality monitoring and metrics for transport adequately support the assessment of actions and by-laws in the sector	Action 21.2: Integrate GHG emissions and air quality metrics into the Urban Development Index (UDI)	New (concept)	New (concept)	New (concept)	New (concept)	New (in planning)
		Action 22.1: Develop a funding strategy to fund waste diversion infrastructure and operating expenditure for waste minimisation and diversion from landfill	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 22.2: In collaboration with City departments and external stakeholders, develop and implement the Circular Economy Action Plan	Implementation	Implementation	Implementation	Implementation	Implementation
		Action 22.3: Improve the waste management evidence base	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
	Goal 23: Reduce organic waste disposal to landfill (in line with Provincial Integrated Waste Management Plan targets) by 50% by 2022, and 100% from 2027, through better waste separation, treatment and utilisation	Action 22.4: Investigate options for the recovery of textile and fabric waste	New (concept)	On hold	On hold	New (concept)	New (concept)
		Action 23.1: Maximise the diversion of garden and food waste	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
		Action 23.2: Scale up the roll-out of composting containers	Expansion of existing programme	Implementation	Implementation	Implementation	Implementation

	Goal 24: Increase diversion of recyclables from disposal to landfill to 40% by 2025, 55% by 2030, >70% by 2035, and 85% by 2050, through improved collection, waste separation and providing support to informal workers	Action 24.1: Plan and implement a scaling up of services to collect waste separated at source and increase the roll-out of Think Twice dry waste collection services Action 24.2: Carry out communication and marketing campaigns to promote behavioural change and to champion participation in the circular economy Action 24.3: Implement mandatory segregation of recyclables and organics, and collection at all municipal buildings and facilities * No lead department - action requires further study and engagement Action 24.4: Maximise the crushing and reuse of builder's rubble	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
			Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
			New (concept)	New (concept)	New (concept)	New (concept)
			Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
	Goal 25: Reduce the climate and environmental impact of waste disposal and wastewater treatment facilities by increasing biogas and landfill gas collection efficiency, treatment and utilisation	Action 25.1: Complete landfill gas-to-energy projects at all major landfill sites Action 25.2: Continue efforts to implement and expand the beneficiation of wastewater sludges and associated recovery of biogas, heat and nutrients at City wastewater treatment works (WWTWs)	Expansion of existing programme	Implementation	Implementation	Implementation
			New (in planning)	New (in planning)	New (in planning)	New (in planning)
			Implementation	Implementation	Implementation	Implementation
			Implementation	Implementation	Implementation	Implementation
CCWA 1: Mainstreaming, governance, research and knowledge management	Goal 26: Mainstream climate change responses into key City strategies, policies, processes and plans	Action 26.1: Work towards the inclusion of climate responsiveness in City of Cape Town sector plans Action 26.2: Ensure that climate change is adequately accounted for in the review and development of City strategies, policies, by-laws and implementation plans Action 26.3: Integrate climate change response into City strategic infrastructure, budgeting and project management processes Action 26.4: Convene and maintain an active climate change transversal working group, including work streams focused on adaptation and mitigation	Implementation	Implementation	Implementation	Implementation
			Implementation	Implementation	Implementation	Implementation
			New (in planning)	Implementation	Implementation	Implementation
			New (in planning)	Cancelled	Cancelled	New (in planning)

	Goal 27: Conduct and commission climate-change-related research, and ensure that the City remains up to date with emerging research in the field	Action 27.1: Put in place an ongoing comprehensive climate change response research programme	Expansion of existing programme	Expansion of existing programme	Implementation	Implementation
		Action 27.2: Enhance climate change data, modelling and knowledge management in the City to support decisions	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
		Action 27.3: Work towards applying innovation in the City's climate change response through the continued use of innovation tools, methodologies and platforms	Expansion of existing programme	Expansion of existing programme	Implementation	Implementation
		Action 27.4: Encourage co-production, learning and knowledge exchange as a method of ensuring the effective mainstreaming of climate change response and research outputs	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
CCWA 2: Economic impacts and green economy opportunities	Goal 28: Advance the local green products and services market, and reduce the risks of climate impacts on local economic development	Action 28.1: Facilitate investment in the local green economy	Expansion of existing programme	Implementation	Implementation	Implementation
		Action 28.2: Promote the development of South African green products and services to increase local demand and supply	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
		Action 28.3: Reduce the climate impact risk to the local economy	New (concept)	New (concept)	New (concept)	New (concept)
		Action 29.1: Mainstream the implementation of climate-responsive sustainable procurement in the City's supply chain management processes and decisions	Expansion of existing programme	Implementation	Implementation	Implementation
CCWA 3: Business models, revenue and financing climate change response	Goal 29: Support the development of a climate-resilient and carbon-neutral green economy through City operations	Action 29.2: Continue the implementation of the City's green jobs programmes, with a focus on climate resilience and risk reduction	Implementation	Implementation	Implementation	Implementation
		Action 30.1: Investigate the viability of special rating areas as a means of financing climate change resilience in high-risk areas, and determine a way forward	New (in planning)	On hold	On hold	On hold
		Action 30.2: Investigate options for accessing national and international climate change and sustainability funding, and develop into a shared database	New (in planning)	Implementation	Implementation	Implementation

		Action 30.3: Conclude an initial investigation and assessment of innovative insurance mechanisms for addressing climate change adaptation and resilience	Implementation	On hold	On hold	On hold
	Goal 31: Use financial mechanisms, including business models, tariffs, investment and divestment, to respond to climate change impacts and mitigation opportunities	Action 31.1: Consider climate change impacts and opportunities in the City's business, revenue and operational model	New (in planning)	New (in planning)	New (in planning)	New (in planning)
		Action 31.2: Support the call for responsible divestment by taking steps, where possible, to divest financial assets from fossil fuels, or reinvest in climate-friendly activities	Implementation	Completed	Completed	Completed
	Goal 32: Ensure that Cape Town's residents, businesses, visitors and City officials receive timely, effective and appropriate climate change education, communication and training	Action 32.1: Develop and implement a climate change response communication and education plan with a strong focus on community outreach and collaboration	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
		Action 32.2: Support climate-change-related skills and knowledge development in the City and across Cape Town	New (concept)	New (concept)	New (in planning)	New (in planning)
	CCWA 4: Communication, collaboration and skills development	Action 32.3: Use social media effectively to communicate early warnings of climate shocks and extreme weather events	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
		Action 33.1: Work to facilitate non-partisan collaborative planning and action for carbon neutrality and climate resilience with C40 partner cities	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
	Goal 33: Establish and maintain partnerships with local, regional and international organisations to support climate actions	Action 33.2: Partner with local, regional and international organisations that support climate change response, and explore new partnerships with key stakeholders	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
	Goal 34: Work with national government to collaboratively reform or devolve decision-making to support inclusive climate change action	Action 34.1: Support government entities across all tiers to reform and improve state enterprises and planning functions in key sectors such as electricity, transport and water	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme	Expansion of existing programme
	CCWA 5: Promote, protect and enhance human and ecosystem health	Action 35.1: Continue to implement the Cape Town Bioregional Plan, Biodiversity Network, and Local Biodiversity Strategy and Action Plan (LBSAP)	Expansion of existing programme	Implementation	Implementation	Implementation
		Action 35.2: Develop and implement a City of Cape Town green infrastructure programme, including a focus on supporting climate change response	New (in planning)	Implementation	Implementation	Implementation

Goal 35: Ensure that the City's climate change response is integrated into all City planning and development.	Action 35.3: Develop a database of Cape Town-specific nature-based solutions and best practices for climate change response, and promote their implementation	New (concept)	New (in planning)	Implementation	Implementation
	Action 36.1: Take action to address air pollution as part of the City's climate change response	Implementation	Implementation	Implementation	Implementation
	Action 36.2: Take action to address water pollution as part of the City's climate change response	Implementation	Implementation	Implementation	Implementation
	Action 36.3: Continue to implement disaster risk education and awareness initiatives focused on household safety and preparedness, and expand these initiatives where required	Implementation	Implementation	Implementation	Implementation
	Action 36.4: Ensure that mental health is adequately addressed as part of the City's climate change response	New (concept)	New (concept)	New (concept)	New (concept)
	Action 37.1: Implement the City of Cape Town food systems programme	New (in planning)	Implementation	Implementation	Implementation
Goal 36: Ensure that physical health and mental wellbeing are addressed through the City's climate change response					
Goal 37: Promote food security as well as low-carbon and climate-resilient food systems in Cape Town					

NOTES



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