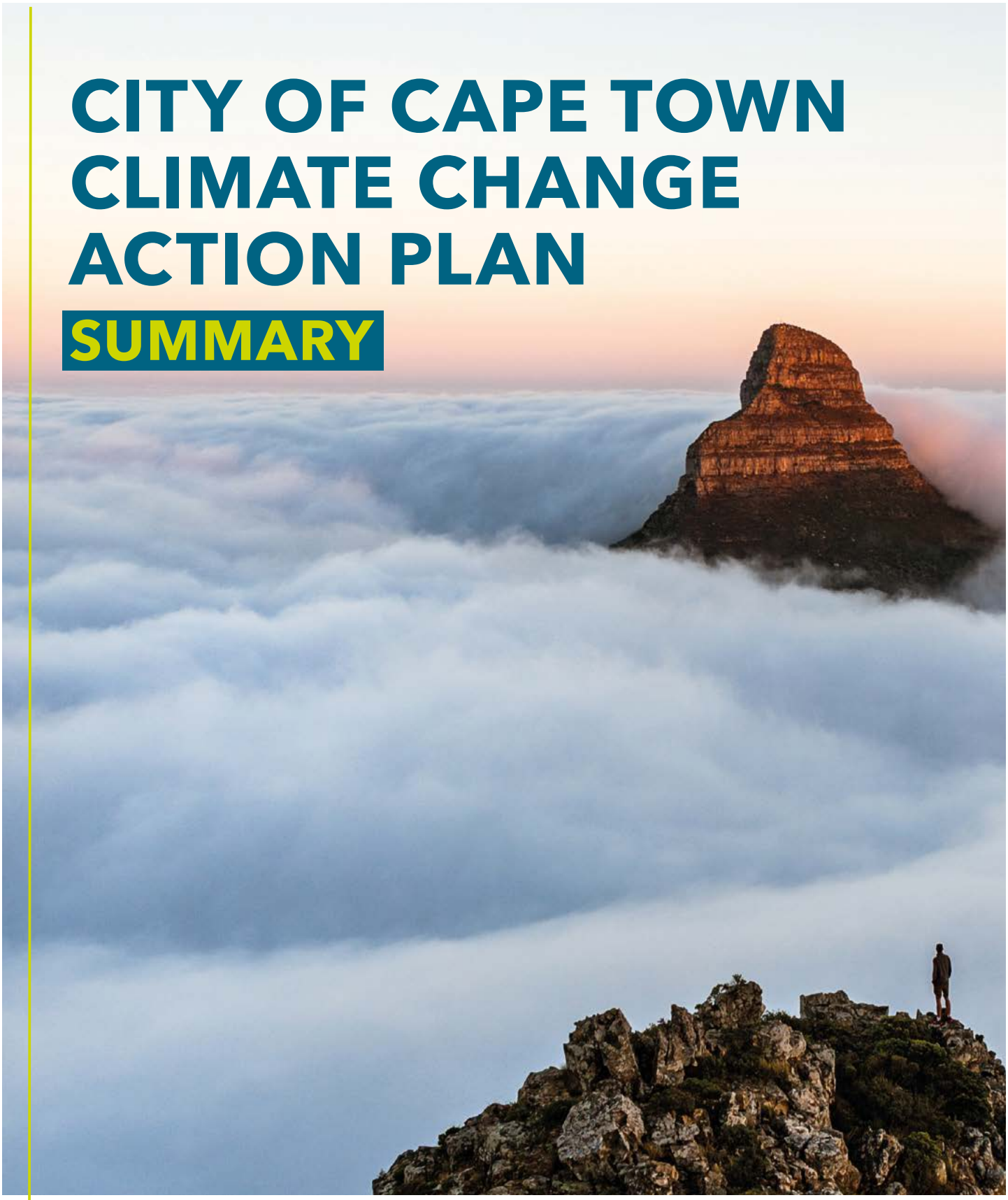
CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

CITY OF CAPE TOWN CLIMATE CHANGE ACTION PLAN

SUMMARY



Making progress possible. Together.

LET'S ACT

FOR A STRONGER CAPE TOWN

ELECTRONIC DOCUMENT NAVIGATION SHORTCUTS

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WHY MORE AMBITIOUS CLIMATE ACTION?

Urgent action is needed to keep global average temperature increases below 1,5 °C and reduce the climate change impacts that critically risk socio-economic development, environmental sustainability, and human health and well-being. The City of Cape Town Climate Change Action Plan sets out how the City will act to cut its share of greenhouse gas emissions while adapting to the inevitable impacts projected across human and natural systems. The City's plan is, however, not only about emissions and climate risk – it is also about using the opportunity to be a leader in transitioning to a competitive, resilient and efficient green economy.

The City of Cape Town has committed to a heightened level of ambition on climate change response, both through its new Climate Change Strategy (2021) and through a global climate change action commitment with partner organisation C40. The City of Cape Town is among nearly 100 globally leading cities in this coalition, all committed to bold climate action to limit global warming through local government leadership and action. Cape Town is

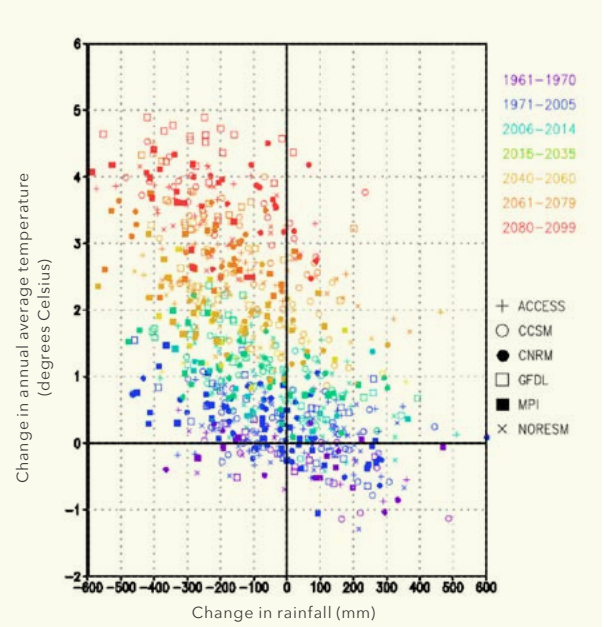


Figure 1: Climate change projections indicate that the city and surrounding region will become increasingly hotter and drier into the future.

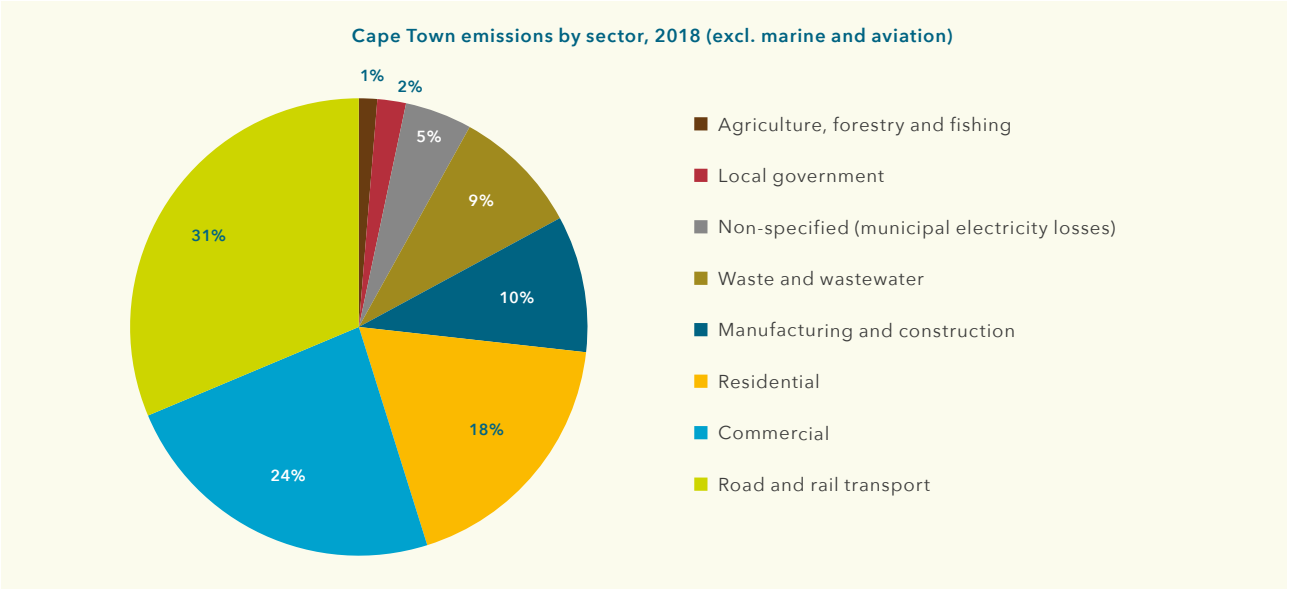


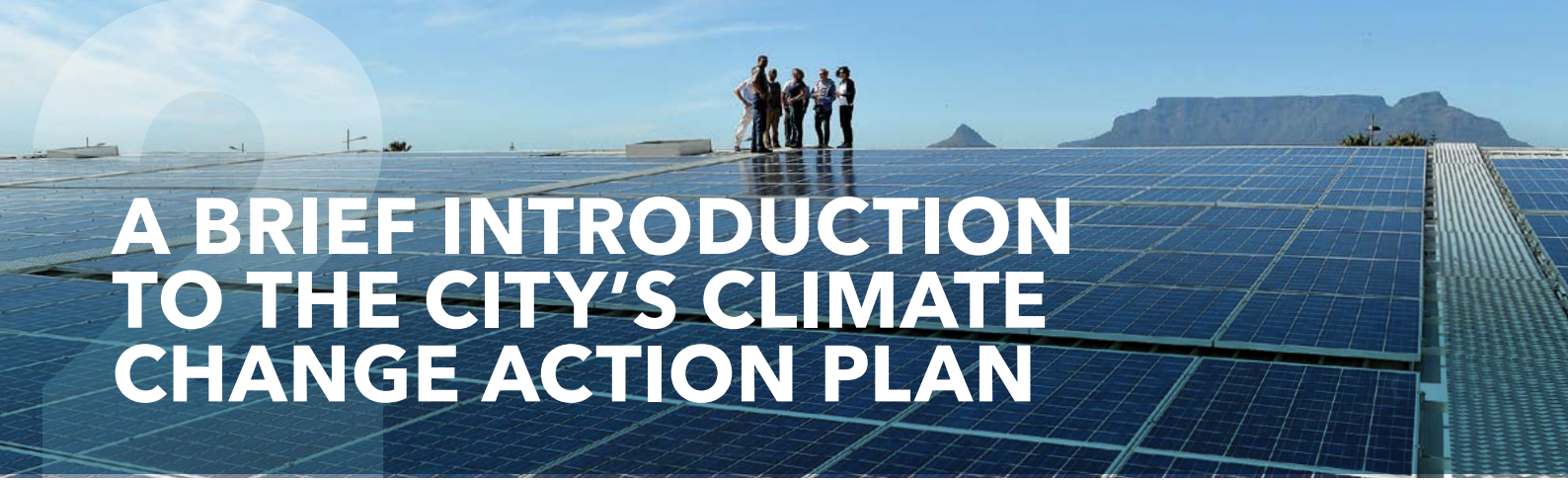
Figure 2: Sectoral breakdown of emissions for 2018. Although liquid fuels consumed by transport account for more energy in total, over half of the city's emissions arise from electricity use. This is due to the high carbon intensity of South Africa's coal-based grid electricity.

also part of the C40 Deadline 2020 programme to meet the goals of the Paris Agreement, which requires carbon neutrality by 2050 and enhanced climate resilience.

The City's Climate Change Action Plan aligns with this global agenda through its own vision to become a **"climate-resilient, resource-efficient and carbon-neutral city that enables inclusive economic development and healthy, thriving communities and ecosystems"**.

The Climate Change Action Plan also aligns with other policy action already established by the City, including the Water Strategy and the Cape Town Resilience Strategy, the latter of which prioritises action against chronic stresses and acute shocks such as climate change, through projects to improve Cape Town's resilience and reduce its vulnerability.

Above: A glimpse of a carbon neutral and climate resilient future Cape Town.



A BRIEF INTRODUCTION TO THE CITY'S CLIMATE CHANGE ACTION PLAN

The Climate Change Action Plan has 10 strategic focus areas on topics from coastal resilience and zero-emissions buildings to inclusive planning, each of which has goals describing the actions to be taken to implement the plan and achieve the vision. The plan also sets out how the City will support this implementation through cross-cutting work areas such as the green economy. This report summarises both the strategic and the cross-cutting areas, and presents key examples of those actions within each that are needed towards climate resilience, resource efficiency and carbon neutrality in Cape Town. The action plan, which is also based on the 10 principles shown on the right, comes at a time when there is the opportunity to 'build back better' out of the Covid-19 pandemic.

PRINCIPLES INFORMING THE DEVELOPMENT OF THIS PLAN:

1. Resilience
2. Economic inclusiveness
3. Embedded sustainability
4. Carbon neutrality
5. Health and well-being
6. Collaboration and integration
7. Climate-responsive urban development
8. Equitable service delivery
9. Precautionary principle
10. Innovation and transformational planning

These principles inform the development of goals and actions in this plan. Each of these principles is explored in detail in the City of Cape Town Climate Change Strategy.

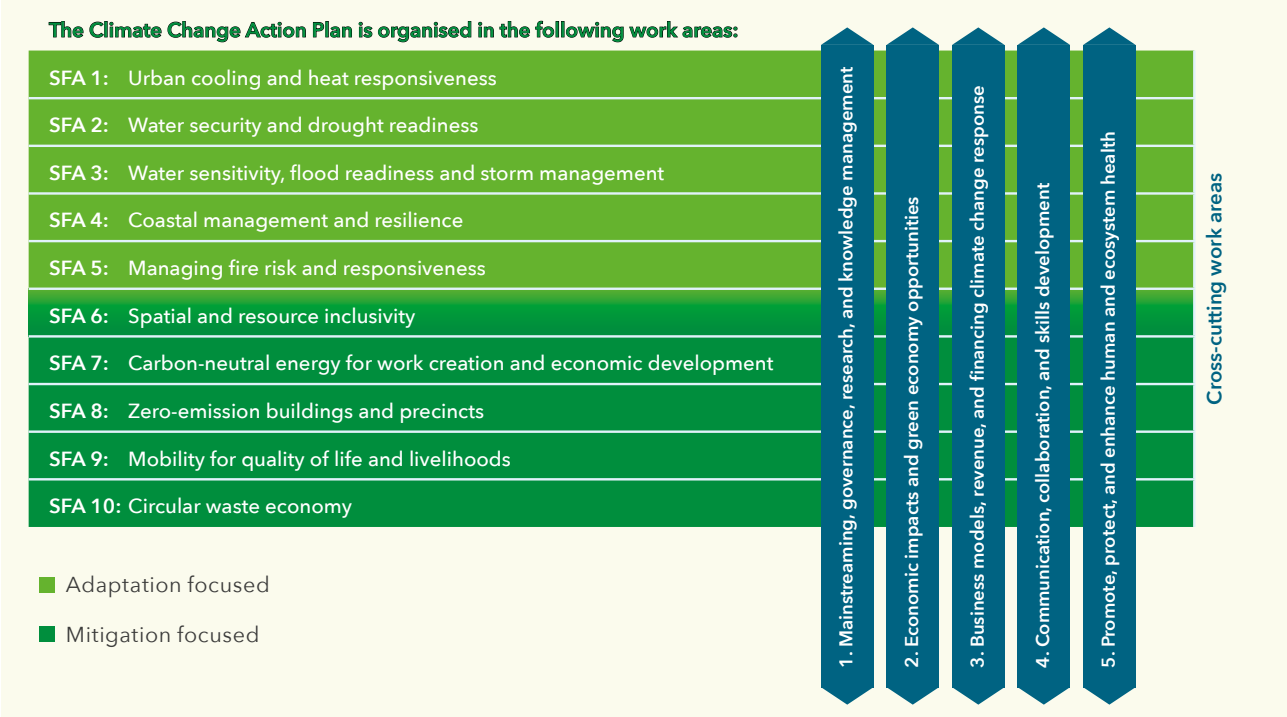
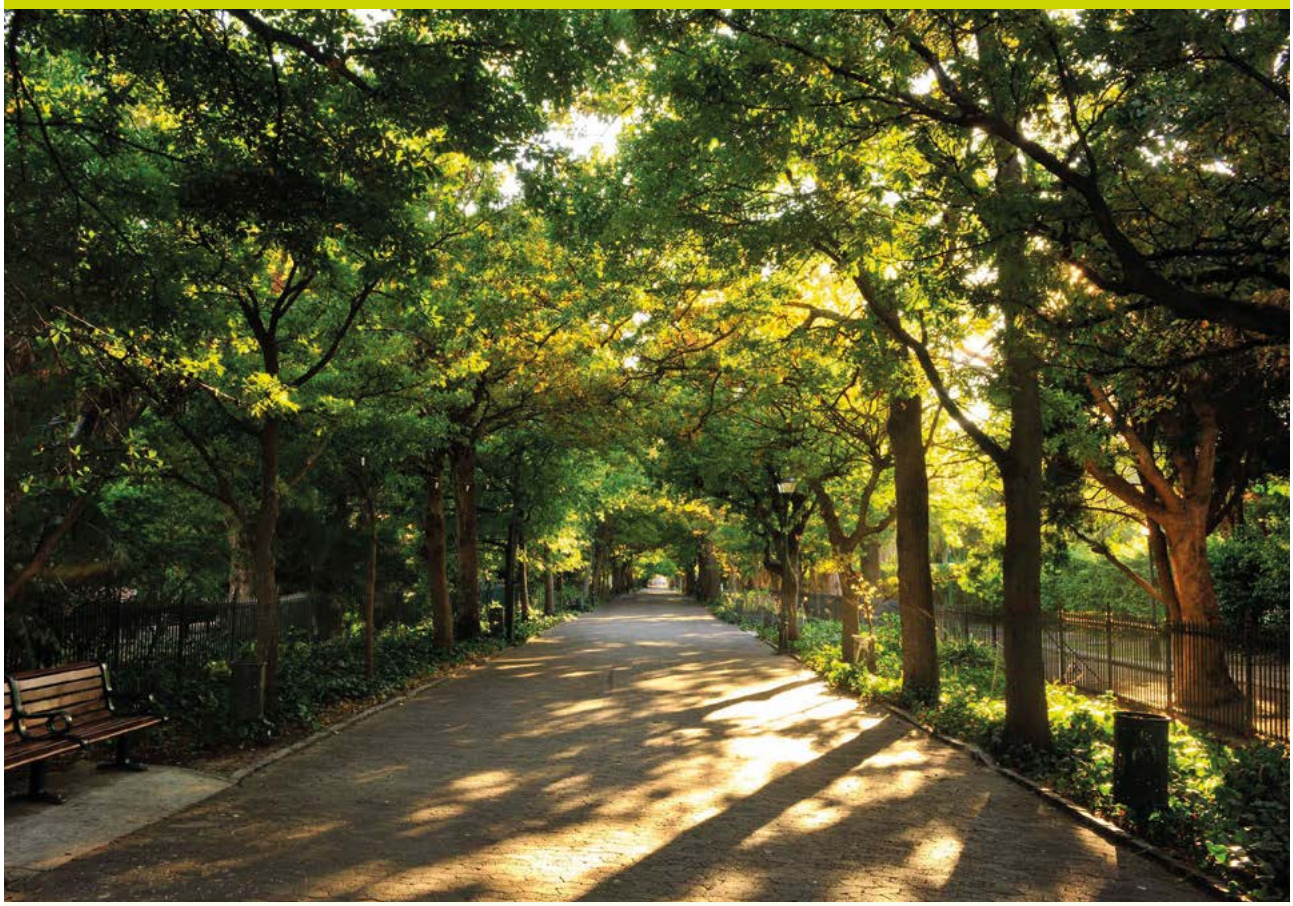


Figure 3: Strategic Focus Areas and Cross-cutting Work Areas. SFAs 1–5 are focused on climate change adaptation, SFA 6 has elements of both climate change adaptation and mitigation, and SFAs 7–10 are focused on climate change mitigation.

3 STRATEGIC FOCUS AREAS

SFA 1: Urban cooling and heat responsiveness



Key work area elements:

- **Heat response**
  (See goal 1)
- **Urban greening**
  (See goal 2)

Climate change includes higher risks to health and greater impacts on Cape Town from heatwaves and high-heat days. One way to counter the 'heat island effect' – where urban factors such as buildings and roads raise temperatures in cities by up to 5 °C – is to deploy urban greening. This is the focus of **goal 2** of the Climate Change Action Plan. Tree planting targeted to high-risk areas can shade buildings and surfaces and comes with the natural cooling effect of water evaporating from leaves. Tree-planting initiatives in areas prone to high heat will need to be irrigated sustainably, and the City will campaign for residents and businesses to get involved. Added to such prevention measures, the action plan also ensures that warnings will be disseminated, and that people can access places to stay cool when it does get too hot, reducing the immediate health risks **(goal 1)**.

SFA 2 and 3: Water security and drought readiness; Water sensitivity, flood readiness and storm management

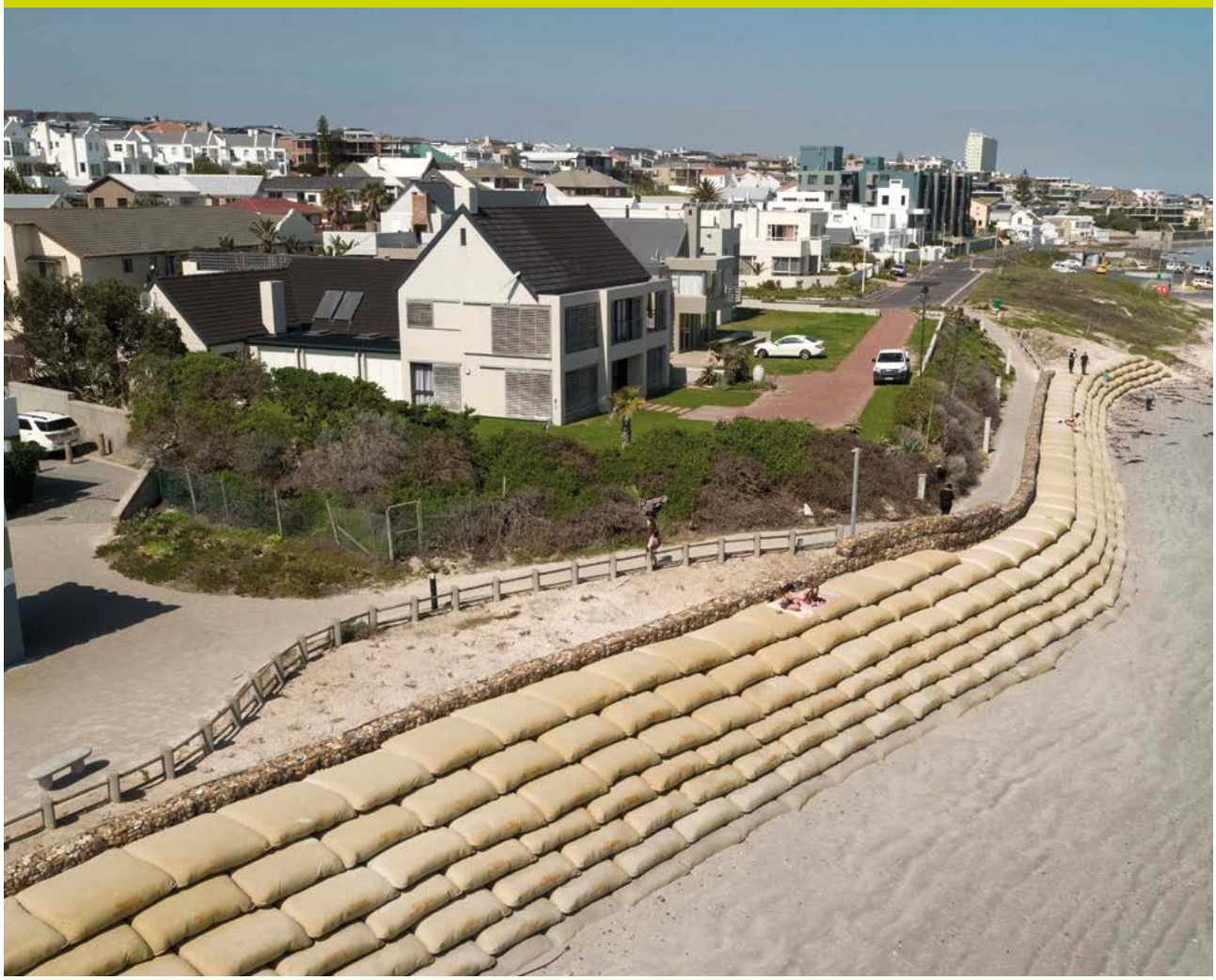
Key work area elements:

- **Water-demand management** (See goal 3)
- **Water-supply augmentation** (See goal 4)
- **Water-sensitive city** (See goal 5)
- **Flood mitigation** (See goal 6)

The City has already identified action to make Cape Town more resilient to drought. The City's Water Strategy, precipitated by the severe drought of 2015 to 2018, forms the basis for water-related actions in the Climate Change Action Plan and aims to make Cape Town water sensitive by 2040; this means taking a holistic approach. Cape Town has a high geographical vulnerability to flooding because of low-lying areas and high water tables, plus vulnerability related to inadequate drainage in informal settlements. The plan splits actions on water into two strategic focus areas: water security and drought readiness; and water sensitivity, flood readiness and storm management (strategic focus areas 2 and 3 in the plan). Each comprises two goals – water security is to be achieved by reducing demand and increasing supply **(goals 3 and 4)**, and flooding risks are to be tackled by **goals 5 and 6**.

Cape Town aims to become water sensitive by optimising its extensive network of rivers and wetlands, restoring and rehabilitating these to create liveable urban waterways. Based on sound ecological principles, water management will be integrated closely with land-use and development planning, to create a diversity of water resources and to optimise the use of stormwater and urban waterways, including for reuse and recreation.

SFA 4: Coastal management and resilience



Key work area elements:

- **Coastal resilience**
  (See goal 7)
- **Cooperative coastal management**
  (See goal 8)

Cape Town's extensive coastline consists of over 300 km of both rocky and sandy shores, ranging from highly developed areas to relatively untouched natural environments. It is a valuable natural asset and a big draw for tourism and recreation – its annual contribution to Cape Town's economy has been estimated at R40 billion. The encroachment of urban development, however, threatens the integrity of the coastline, which acts as a buffer against storm surges. Climate change will, in the long term, lead to sea-level rises, but the coastal erosion it accelerates is already happening.

Goals 7 and 8 will promote coastal resilience and engage stakeholders in coastal management. Key to this will be the development of a coastal and sea-defence decision framework that readies the City for when to implement a range of interventions – from rehabilitating or restoring ecosystems and manipulating sand (including creating new sand dune systems), through the construction of sea walls and other defences, to re-engineering and upgrading infrastructure. Managed retreat where coastal defences are not an option is also part of the range of solutions. This coastal and sea-defence decision framework will deliver multidisciplinary consensus on the most sustainable, equitable and risk-averse interventions to use.

SFA 5: Managing fire risk and responsiveness

Key work area elements:

- **Reduced fire risk**
  (See goal 9)

Managing fire risk and responsiveness is the concern of strategic focus area 5 in the action plan, and **goal 9** is to proactively reduce fire risk and the impact of fires on communities and natural areas. Wildfires are, though, a natural occurrence in the Cape Floristic Region, because the vegetation is fire prone and fynbos is fire adapted, needing fire to survive. The fires become a real concern, however, when they are too frequent and intense. Climate change is putting pressure on Cape Town's wildfire management.

Poorer people are likely to be disproportionately harmed by climate change, including those people living in informal settlements that are more vulnerable to increased urban fire risks. The Climate Change Action Plan focuses on reducing these risks through education, the roll-out of fire-proofed building materials and investigating access to affordable, safe energy solutions. These actions are sensitive to the fact that the spread of urban fires has complex underlying factors in informal settlements, including unsafe energy use, high density, and fire-prone building materials.

SFA 6: Spatial and resource inclusivity

Key work area elements:

- **Urban form and functionality**
  (See goal 10)
- **Access to services**
  (See goal 11)

Strategic focus area 6 – spatial planning and resource inclusivity – continues the need to address the higher burden put on poorer people by climate change, and **goals 10 and 11** aim to ensure inclusivity. Plans for urban development must take account of equity, including how it is affected by the apartheid legacy in South Africa, by ensuring, for example, that poorer people are not forced to spend disproportionate amounts on transport and are given equitable access to city services. **Goal 11** also aims to ensure that low-income residents are climate resilient.

In making **goal 10** a success – to densify mass transit routes through mixed-use developments that support public transport and include social housing – the City has an opportunity in its significant portfolio of well-located land. Via C40 Cities' Reinventing Cities programme and the City's own Catalytic Land Development Programme to pilot carbon-neutral sites, this land will be released for inclusive housing, densified development along public transport corridors, and for mixed use and mixed income.

Transformative effort to tackle climate change will need to be inclusive through such actions to ensure, under **goal 11**, that all Capetonians are able to live in well-located, energy-efficient and climate-proof housing, are easily able to access safe and affordable transport, have affordable high-quality water, sanitation, refuse collection and clean energy, and enjoy a healthy local environment, with access to green spaces.

SFA 7: Carbon-neutral energy for work creation and economic development

Key work area elements:

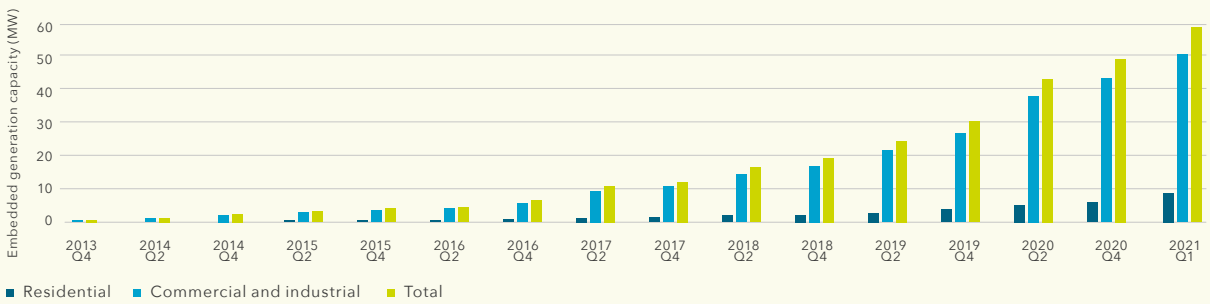
- **Clean electricity supply** (See goal 12)
- **Future grid** (See goal 13)
- **Energy efficiency and carbon-neutral molecular fuels** (See goal 14)

Strategic focus area 7 – carbon-neutral energy for work creation and economic development – has three **goals (12 to 14)** towards making the supply of energy to Cape Town carbon neutral. The first goal has the potential to make the biggest difference, transforming the electricity grid's reliance on highly emitting coal energy, which accounts for over half of the city's greenhouse gas emissions. The supply should be 100% carbon neutral before 2050, but **goal 12** also urges action to "move as quickly as prices and opportunities allow".

Decarbonising energy in Cape Town is crucial to its growing green economy and to the industries that would otherwise be left behind as the world values trading with carbon-neutral businesses. Small-scale embedded generation (SSEG) forms a part of the strategy. A City by-law regulates the registration of SSEG systems to be compliant with legal and safety standards – and the action plan promotes this registration. Registered grid-connected rooftop solar panels around the city, for example, had reached a generating capacity of nearly 60 MW by mid-2021 (See graph below). Municipal buildings, and larger-scale plants, will also be included in a Renewable Energy Roadmap targeted by the Climate Change Action Plan. Recent legislative reforms have helpfully opened the door for the City to diversify its sources of electricity. Underpinning a raft of actions to support the cleaning up of energy supply, Cape Town will invest in the metropolitan distribution grid and retail systems of the future by getting "technologically and commercially ready" for them **(goal 13)**.

Aside from decarbonising electricity supply, hydrogen and other carbon-neutral molecular fuels also have a major longer-term role in the Climate Change Action Plan. **Goal 14** will maximise energy efficiency and develop a regional value chain for these fuels.

Approved grid-tied, commissioned, embedded generation | Capacity



SFA 8: Zero-emission buildings and precincts

Key work area elements:

- **Net-zero carbon new buildings 2030**
  (See goal 15)
- **Net-zero carbon existing buildings 2050**
  (See goal 16)
- **Net-zero carbon municipal buildings 2030**
  (See goal 17)

The total use of energy across commercial, municipal and residential buildings makes up the largest contribution to greenhouse gas emissions in Cape Town. The following two near-term goals of the action plan therefore reflect the importance of buildings as contributors to climate change, combined with the strong development management function of cities.

- All of Cape Town's new buildings, whether residential, commercial or municipal, will be net-zero carbon by 2030 **(goal 15)**.
- Municipal buildings already built today will also be net-zero carbon in operation by 2030 (**goal 17**; although this does not cover utilities, such as wastewater treatment plants).

Goal 16 drives an effort to support the retrofitting of existing buildings in the private sector; 2050 is the target by when all existing residential and commercial buildings should operate at net-zero carbon under this goal. In addition, the City is supporting the development of carbon-neutral precincts to reduce the energy used in-between buildings and to enhance our neighbourhoods' sustainability and climate resilience. Carbon-neutral precincts enable low-carbon lifestyles, energy-efficient service delivery, safe non-motorised transport options, access to public transport, and opportunities for larger-scale renewable energy deployment. These actions reveal that the City has real power and ambition to drastically reduce greenhouse gas emissions through the design, construction and operation of Cape Town's buildings and precincts.

SFA 9: Mobility for quality of life and livelihoods

Key work area elements:

- **Rail crisis response**
  (See goal 18)
- **Shift from car-centred city**
  (See goal 19)
- **Electro-mobility**
  (See goal 20)
- **GHG emissions and air quality monitoring for transport**
  (See goal 21)

Strategic focus area 9 – mobility for quality of life and livelihoods – builds on the question of equity and inclusivity addressed specifically by **goal 11** in SFA 6, on inclusive planning. A 2018 analysis by the City found that the 25% of households that are the poorest spent an average of 43% of their income on transport. It is a wide range of geographical locations and income brackets, however, that are challenged by the spatial form of Cape Town, which demands that residents travel long distances to get to work. The city's rail system is ailing, too, and private vehicle ownership is steadily rising, as is informal public transport after years of slow decline in favour of scheduled services. Road-based fuel currently accounts for about half of the city's overall energy consumption and this share is increasing.

While the City does not have a direct mandate to supply rail transport, it is legislatively obligated to plan for and support an integrated transport system with rail at its core. The action plan therefore emphasises the restoration, rehabilitation and expansion of the rail system in partnership with the rail utility and, by 2030, to achieve 30% more carrying capacity compared with 2010 **(goal 18)**. **Goals 19 and 20**, meanwhile, aim to shift private transport to other modes (such as by dedicating lanes to buses and expanding cycling networks and footways), and aim to fully power public and freight transport by electric or alternative fuels by 2050. Following the EASIA (enable, avoid, shift, improve, adapt) framework, the City aims to enable these shifts and to address quality of life in the city, as well as carbon neutrality. Lives and livelihoods will also be better when trips are shorter and fewer (the 'avoid' in EASIA), because of improved City planning and more efficient and better-integrated public transport.

Finally, under mobility, **goal 21** sets out how greenhouse gas and pollutant emissions will be monitored in Cape Town's transport sector.

SFA 10: Circular waste economy

Key work area elements:

- **Integrated waste management** (See goal 22)
- **Divert organic waste** (See goal 23)
- **Recycle** (See goal 24)
- **Waste to energy** (See goal 25)

The final strategic focus area in the Climate Change Action Plan, number 10, is towards a circular waste economy. Despite population growth, general waste sent to landfill in Cape Town has remained steady in recent years, at an annual average (2016–2019) of 1,7 million tonnes. The four goals of this area are to get economic benefit from waste and to reduce its environmental impact. A City waste strategy is being developed to meet **goal 22**, and **goal 23** is to cut the amount of organic waste going to landfill – by half imminently and by 100% from 2027 onwards as required by provincial government targets. Added to organic waste's emission of methane – a particularly potent greenhouse gas – food, garden and similar waste also contaminates materials that could otherwise be recycled. Around 10% of Cape Town's greenhouse gas emissions arise from organic waste, and around 95% of this contribution happens at landfill. Without action, city population growth will increase these emissions. The target to stop all organic waste reaching landfill by 2027 will be achieved through better waste separation, treatment and use. The related **goal 25** is to increase the collection of biogas[1] and landfill gas,[2] both of which can be treated and put to use. Finally, on stopping recyclables from going to landfill, **goal 24** aims to increase the diversion by 40% by 2025, and by 55% by 2030, with the plan including support for informal waste workers.

1 Methane gas recovered from a purpose-built organic waste or wastewater digester or sewage infrastructure.
2 Methane gas recovered from landfill containing general waste. This is uncontrolled decay and therefore may require the significant scrubbing of CO_2 to be usable.

4 CROSS-CUTTING WORK AREAS

Supporting and enabling all the strategic focus areas are the cross-cutting work areas. These encompass **goals 26 to 37** and concern the ways the City will support implementation through cross-cutting activities. These goals are at the levels of local policy, economy, climate finance, communication and collaboration.

CCWA 1: Mainstreaming, governance, research, and knowledge management

Key work area elements:

- **Mainstreaming climate change response** (See goal 26)
- **Research** (See goal 27)

To make climate change action central to strategies across all City departments, mainstreaming is **goal 26**. This will ensure that the implementation of the action plan is the shared responsibility of all departments and not the niche concern of one or two. Scientific evidence will inform the recognition of climate response as essential to all City policies, strategies, frameworks and procedures. **Goal 27** is for research to keep Cape Town up to date with this science. City action to enhance climate change data, modelling and knowledge management – including to create an improved data culture and higher data technical standards – will also support mainstreamed climate action decisions. The City has already invested extensively in an open data portal, for example, leading to business and government showing greater transparency to the public.

CCWA 2: Economic impacts and green economy opportunities

Key work area elements:

- **Green and resilient local economy** (See goal 28)
- **Green procurement** (See goal 29)

Both the economic impacts of climate change and the opportunities in the green economy are addressed by the second cross-cutting work area of the action plan. **Goals 28 and 29** will increase international competitiveness by developing the city's green economy – removing the carbon embedded in Cape Town's goods and services and working with economic sectors to reduce their climate risks. The City will advance the local market for green products and services to make Cape Town a green destination to live, work, play, visit and invest in. City operations will also play their part in leading by example through green procurement. The Greentech manufacturing hub that forms part of the Atlantis Special Economic Zone is just one of the foundations on which the City can build its economic strength through the Climate Change Action Plan.

Conceptual carbon quality assurance product labelling system for Western Cape goods

In the developing city context carbon neutrality is primarily an issue of economic competitiveness. It's a matter of quality. We don't want to do harm with the products and services we deliver as a society and an economy. Quality assurance labelling* backed by credible verification agencies can create a value proposition for a higher level of product and service that is trusted and respected in all markets. This diagram is only for conceptual purposes and business and industry associations would need to collaborate in developing a working system and brand.

Blue:

- Manufacturing energy < 50% of coal electricity

Green:

- Manufacturing energy carbon neutral

Silver:

- Manufacturing energy carbon neutral
- Finished good transport carbon neutral
- 75% recyclable by mass

Gold:

- Material inputs carbon neutral
- Manufacturing energy carbon neutral
- Finished good transport carbon neutral
- 95% recyclable by mass

** Labels are for illustrative purposes only.*

CCWA 3: Business models, revenue, and financing climate change response

Key work area elements:

- **Climate finance** (See goal 30)
- **Financial mechanisms** (See goal 31)

The economic challenges and opportunities of climate change and action also need new ways of doing business and attracting finance to support the potential costs involved, the subject of the third cross-cutting area. **Goals 30 and 31** will utilise climate finance and innovative financial mechanisms, including business models, tariffs, investment and divestment, to respond to climate change impacts and mitigation opportunities. Numerous economic and financial actions are detailed in this part of the Climate Change Action Plan.

CCWA 4: Communication, collaboration, and skills development

Key work area elements:

- **Education, communication and training** (See goal 32)
- **Climate action partnerships** (See goal 33)
- **Intergovernmental collaboration** (See goal 34)

The change outlined by the action plan and the lists of goals and actions to which the City is committed, must be communicated effectively to all stakeholders for implementation to be successful. **Goal 32** will ensure timely education, communication and training for residents, businesses, visitors and City officials to change their consumption of energy and production of emissions. Good communication will also support people to take action to improve their resilience and to protect themselves against climate shocks and stresses, and will give people clear and up-to-date information during events, including through social media. **Goal 33** is designed to support climate action partnerships with local, regional and international organisations (including C40 Cities, the Resilient Cities Network and other cities in South Africa and beyond). Collaboration is also the theme of **goal 34** on ensuring that decision making – particularly in the currently challenged and transitioning electricity, transport and water sectors – is reformed or devolved to support inclusive climate action.

CCWA 5: Promote, protect, and enhance human and ecosystem health

Key work area elements:

- **Green infrastructure** (See goal 35)
- **Health** (See goal 36)
- **Food security** (See goal 37)

The final cross-cutting work area in the City Climate Action Plan is to promote, protect and enhance human and ecosystem health. Cape Town has a biodiversity that is globally unique, and as such, biodiversity conservation and management must be prioritised amid rapid urban development. Healthy ecosystems are vital to human health, by providing ecosystem services such as food and water, by regulating our environment and climate, and by providing recreational spaces and pleasant natural aesthetics. Actions within **goals 35 to 37** range from promoting low-carbon food security and improving air and water quality, to implementing a green infrastructure programme that softens urban landscapes and realises all the benefits of green spaces in Cape Town, with fair access that promotes the physical and mental health of all Capetonians.

LET'S ACT

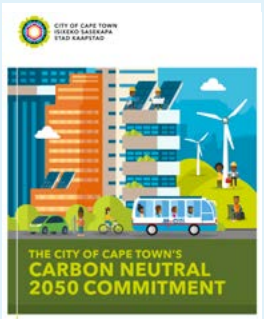
The Covid-19 pandemic is a reminder that, because such crises affect all of us, the responses must also include all of us. There is an opportunity catalysed by the pandemic for populations and political leaders to 'build back better', and to recover from the events in a sustainable and inclusive way.

The City of Cape Town recognises its responsibility to show climate leadership through vision, planning, engagement, regulatory innovation, infrastructure development and the running of its utilities and internal operations.

The 37 goals, detailed across the comprehensive strategic focus areas and cross-cutting work areas in the Climate Change Action Plan, aim to set the City on its path to climate resilience and a carbon-neutral impact on the planet. Achieving these ambitious goals requires collaborative action, and the City is thus calling on residents, businesses, non-governmental organisations, academia, other spheres of government, and partners across the city and beyond to join the climate action journey.

How can I contribute and where do I start?

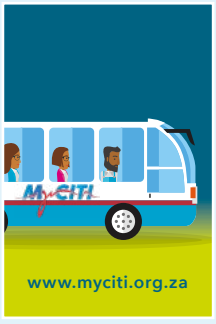
The City has a number of existing booklets, pamphlets and other communication materials which outline various actions that can be taken to contribute to Cape Town's climate change response. Some of these are indicated in the documents below (click on each for more):



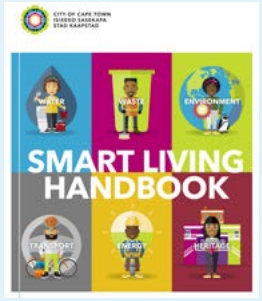
Reducing your carbon footprint

Reduce, reuse, recycle (including organic waste)

Becoming water wise



Travel by bus
(your rates and taxes bought the system)



Smarter and more sustainable living

Planting and maintaining trees

Preparing for impacts

6 LIST OF ACTIONS

SFA 1: URBAN COOLING AND HEAT RESPONSIVENESS
Goal 1: Reduce immediate risks to health during heatwaves and high-heat days
Action 1.1 Draft and implement a heatwave and high-heat day action plan and SOP **Action 1.2** Develop and implement a network of cooling centres **Action 1.3** Develop and implement an early-warning and real-time monitoring system for heat
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 **Action 2.2** Devise and implement an urban greening programme to reduce the heat island effect

SFA 2: WATER SECURITY AND DROUGHT READINESS
Goal 3: Reduce demand for water to protect water resources and ensure sustainability of supply
Action 3.1 Continued implementation of the City's water conservation programme focused on demand-side management
Goal 4: Work to augment and increase water supplies to achieve 99,5% assurance of supply
Action 4.1 Augment Cape Town's water supply to ensure the long-term sustainability of supply **Action 4.2** Remove invasive alien plant species in water supply catchment areas and aquifer recharge areas, as well as in natural areas across the city

SFA 3: WATER SENSITIVITY, FLOOD READINESS AND STORM MANAGEMENT
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 **Action 5.2** Restore and rehabilitate the City's rivers and wetlands to create liveable urban waterways
Goal 6: Take action to reduce flooding 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 **Action 6.2** Continued implementation of the City's Winter Readiness Plan and expansion/scaling up where required

SFA 4: COASTAL MANAGEMENT AND RESILIENCE

Goal 7:
Promote coastal resilience to 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
Action 7.2
Initiate the planning, development and execution of a coastal and sea-defence decision framework for Cape Town
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 in order to respond appropriately to such risks in the coastal zone
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

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

SFA 5: MANAGING FIRE RISK AND RESPONSIVENESS

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

Action 9.1
Reduce urban fire risk and the impact of urban fires on communities
Action 9.2
Design and implement a programme and incentives for affordable, safe energy solutions for low-income and informal households
Action 9.3
Reduce wildfire risk and the impact of wildfires on urban communities

SFA 6: SPATIAL PLANNING AND RESOURCE INCLUSIVITY

Goal 10:
Densify mass transit routes through mixed-use developments that support public transport and include social housing

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 emission precincts
Action 10.2
Promote and support integrated human settlement development that is climate-responsive
Action 10.3
Ensure 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

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

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

SFA 7: CARBON-NEUTRAL ENERGY FOR WORK CREATION AND ECONOMIC DEVELOPMENT

Goal 12:
Move as quickly as prices and opportunities allow towards 100% clean electricity supply by 2050

Action 12.1
Promote and administer the uptake of renewable small-scale embedded generation (SSEG) across residential, commercial and industrial sectors
Action 12.2
Finalise and implement a framework and tariffs for the wheeling of renewable electricity
Action 12.3
City-level energy planning that incorporates the carbon-neutral goal
Action 12.4
Develop a renewable energy roadmap and implement as and when economically viable
Action 12.5
Develop an electrical energy storage roadmap Develop an electrical energy storage roadmap
Action 12.6
Local and regional electricity transition in a framework of mutual support with national programmes

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

Action 13.1
Invest in transitioning to the grid of the future
Action 13.2
Investigate, prepare and implement a new utility business model
Action 13.3
Customer relations for a liberalising market

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
Action 14.2
Unlock transition with energy data
Action 14.3
Develop a regional value chain for carbon-neutral molecular fuels

SFA 8: ZERO-EMISSION BUILDINGS AND PRECINCTS

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

Action 15.1
Develop and implement buildings energy efficiency and renewable energy mechanisms and relevant instruments that facilitate all new buildings (residential, commercial) to be net-zero carbon by 2030
Action 15.2
Develop and implement a support programme for influencing developer and market behaviour (informed by a strong evidence base)
Action 15.3
Work to ensure that state-subsidised housing (including social housing, public rental housing and BNG housing) is energy efficient and climate resilient and to ensure that low-income residents have equitable access to essential services

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 that may include financing, rewards, recognition or similar to encourage the faster uptake/application to energy efficiency and renewable energy property upgrades
Action 16.2
Facilitate the development of a programme that aims to improve energy efficiency in all existing residential and commercial buildings, as well as facilitating the provision of renewable energy towards net-zero carbon (in operation) by 2050
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

Goal 17:
All new and existing municipal buildings (excluding industrial plants and utilities) 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
Action 17.2
Develop a programme plan to achieve net-zero carbon for all new and existing municipal buildings by 2030
Action 17.3
Facilitate the uptake of Energy Performance Certificates so that all relevant municipal buildings disclose their energy consumption data

SFA 9: MOBILITY FOR QUALITY OF LIFE AND LIVELIHOODS

Goal 18:
Through the City's role as the transport planning authority and the contracting authority for bus rapid transport (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
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
Action 18.3
Explore contingencies for alternative mass transit options

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 19.1
Use the Integrated Public Transport Network Plan (IPTN) 2032 and the non-motorised transport (NMT) network plans to maximise a change in modal shift away from private vehicles
Action 19.2
Fast track high occupancy vehicle (HOV) lanes, and complete the City of Cape Town Congestion Management Plan
Action 19.3
Ensure that pedestrianisation programmes prioritise improved safety and increase the number of pedestrian/cycling trips made
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

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
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
Action 20.3
Show City leadership and gather real-world data from EV pilot programmes such as the installation of publicly accessible demonstration chargers and the procurement of EVs for the City fleet

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 21.1
Compile a baseline carbon footprint measurement for the operations of the City of Cape Town Transport, Spatial Planning and Environment, and Human Settlements directorates
Action 21.2
Integrate GHG emissions and air quality metrics into the Urban Development Index (UDI)

SFA 10: CIRCULAR WASTE ECONOMY

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

Action 22.1
Develop a funding strategy to fund waste diversion infrastructure and operating expenditure for waste minimisation and diversion from landfill
Action 22.2
In collaboration with the City departments and external stakeholders, develop and implement the Circular Economy Action Plan
Action 22.3
Improve the waste management evidence base
Action 22.4
Investigate options for the recovery of textile and fabric waste

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 23.1
Maximise the diversion of garden and food waste
Action 23.2
Scale up the roll-out of composting containers

Goal 24:
Increase the 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 behaviour 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
Action 24.4
Maximise the crushing and reuse of builders' rubble

Goal 25:
Reduce the climate and environmental impact of waste and wastewater disposal 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 21.2
Continue efforts to implement and expand the beneficiation of wastewater sludges and associated recovery of biogas, heat and nutrients at City wastewater treatment works (WWTW)

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

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
Action 27.2
Enhance climate change data, modelling and knowledge management in the City to support decisions
Action 27.3
Work towards applying innovation in the City's climate change response through the continued use of innovation tools, methodologies and platforms
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

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
Action 28.2
Promote the development of South African green products and services to increase local demand and supply
Action 28.3
Reduce the climate impact risk to the local economy

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

Action 29.1
Mainstream the implementation of climate-responsive sustainable procurement in the City's supply chain management processes and decisions
Action 29.2
Continue the implementation of the City's green jobs programmes, with a focus on climate resilience and risk reduction

CCWA 3: BUSINESS MODELS, REVENUE, AND FINANCING CLIMATE CHANGE RESPONSE

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

Action 30.1
Investigate the viability of special rating areas as a means of financing climate change response in high-risk areas and determine a way forward
Action 30.2
Investigate options for accessing national and international climate change and sustainability funding and develop into a shared database
Action 30.3
Conclude an initial investigation and assessment of innovative insurance mechanisms for addressing climate change adaptation and resilience

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
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

CCWA 4: COMMUNICATION, COLLABORATION, AND SKILLS DEVELOPMENT

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
Action 32.2
Support multistakeholder efforts to develop and implement climate change related skills development programmes for key sectors
Action 32.3
Use social media effectively to communicate early warnings of climate shocks and extreme weather events

Goal 33:
Establish and maintain partnerships with local, regional and international organisations to support climate actions

Action 33.1
Work to facilitate non-partisan collaborative planning and action for carbon neutrality and climate resilience with C40 partner cities
Action 33.2
Partner with local, regional and international organisations that support climate change response and explore new partnerships with key stakeholders

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

CCWA 5: PROMOTE, PROTECT, AND ENHANCE HUMAN AND ECOSYSTEM HEALTH

Goal 35:
Develop and implement a green infrastructure programme that supports climate change response, protects biodiversity, and enhances ecosystem goods and services

Action 35.1
Continue to implement the City of Cape Town Bioregional Plan, Biodiversity Network, and Local Biodiversity Strategy and Action Plan (LBSAP)
Action 35.2
Develop and implement a City of Cape Town green infrastructure programme, including a focus on supporting climate change response
Action 35.3
Develop a database of Cape Town-specific nature-based solutions and best practices for climate change response, and promote their implementation

Goal 36:
Ensure that physical health and mental well-being are addressed through the City's climate change response

Action 36.1
Take action to address air pollution as part of the City's climate change response
Action 36.2
Take action to address water pollution as part of the City's climate change response
Action 36.3
Continue to implement disaster risk education and awareness initiatives focused on household safety and preparedness, and expand these initiatives where required
Action 36.4
Ensure that mental health is adequately addressed as part of the City's climate change response

Goal 37:
Promote food security and low-carbon and climate-resilient food systems in Cape Town

Action 37.1
Implement the City of Cape Town Food System Programme

Making progress possible. Together.