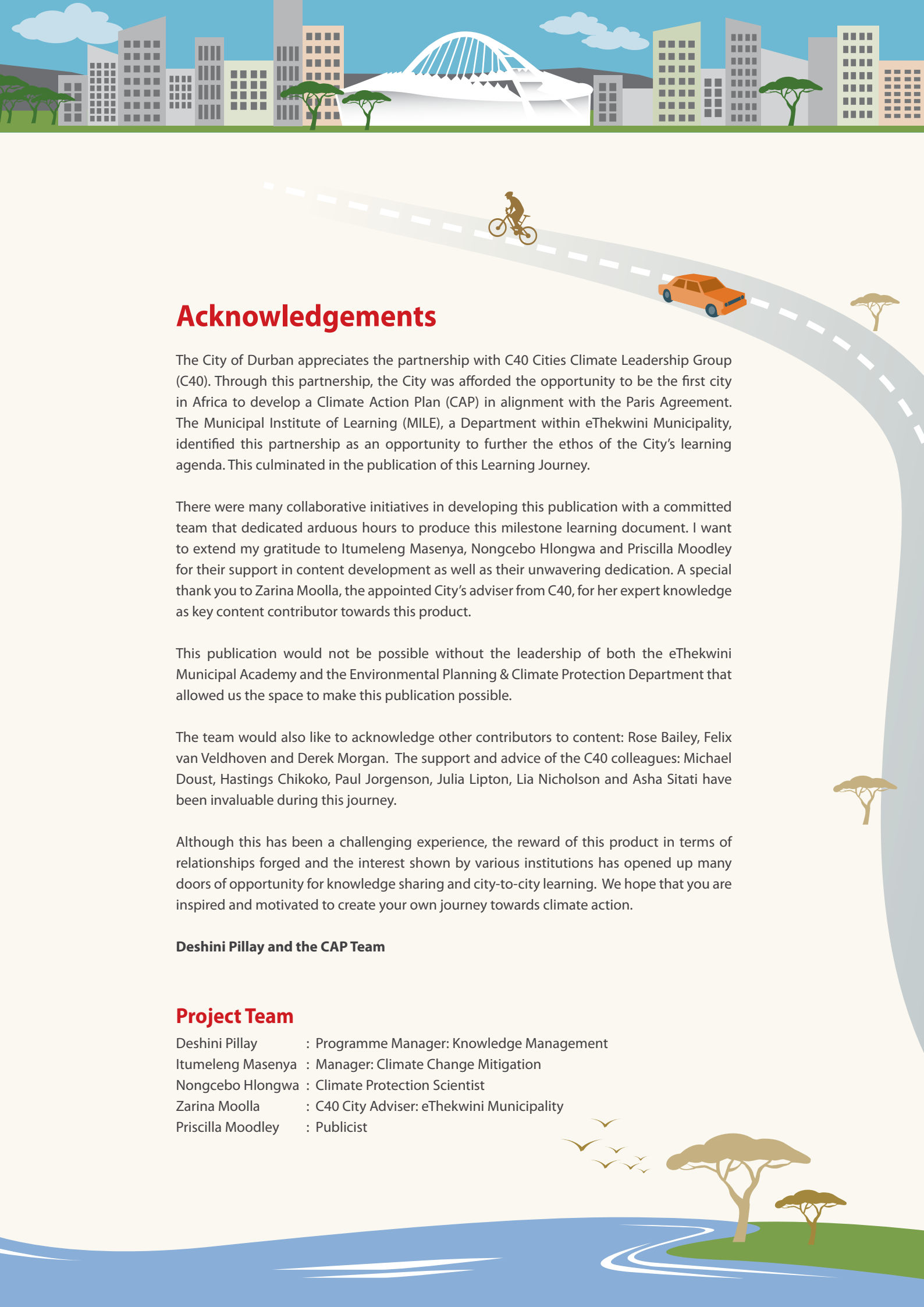




LEARNING JOURNEY

DURBAN CLIMATE ACTION PLAN





Acknowledgements

The City of Durban appreciates the partnership with C40 Cities Climate Leadership Group (C40). Through this partnership, the City was afforded the opportunity to be the first city in Africa to develop a Climate Action Plan (CAP) in alignment with the Paris Agreement. The Municipal Institute of Learning (MILE), a Department within eThekweni Municipality, identified this partnership as an opportunity to further the ethos of the City's learning agenda. This culminated in the publication of this Learning Journey.

There were many collaborative initiatives in developing this publication with a committed team that dedicated arduous hours to produce this milestone learning document. I want to extend my gratitude to Itumeleng Masenya, Nongcebo Hlongwa and Priscilla Moodley for their support in content development as well as their unwavering dedication. A special thank you to Zarina Moolla, the appointed City's adviser from C40, for her expert knowledge as key content contributor towards this product.

This publication would not be possible without the leadership of both the eThekweni Municipal Academy and the Environmental Planning & Climate Protection Department that allowed us the space to make this publication possible.

The team would also like to acknowledge other contributors to content: Rose Bailey, Felix van Veldhoven and Derek Morgan. The support and advice of the C40 colleagues: Michael Doust, Hastings Chikoko, Paul Jorgenson, Julia Lipton, Lia Nicholson and Asha Sitati have been invaluable during this journey.

Although this has been a challenging experience, the reward of this product in terms of relationships forged and the interest shown by various institutions has opened up many doors of opportunity for knowledge sharing and city-to-city learning. We hope that you are inspired and motivated to create your own journey towards climate action.

Deshini Pillay and the CAP Team

Project Team

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Table of Contents

Foreword: Cllr Mxolisi Kaunda, Mayor – eThekweni Municipality	2
Foreword: Dr Ngubane, Chief Learning Officer – eThekweni Municipality	3
Foreword: Mr Hastings Chikoko, Regional Director for Africa – C40 Cities Climate Leadership Group	4
Executive Summary	5
Background to Durban	6
Durban at a Glance	7
Introduction	9
1. Why a Climate Action Plan?	14
2. Elements of a Climate Action Plan	20
3. Planning for the Climate Action Plan	25
4. Good governance is key	33
5. Understanding where we are	38
6. It’s not a perfect science	44
7. Actions speak louder than words	53
8. Putting it all together	60
9. Getting there collectively	65
10. Towards implementation	69
11. Lessons learned	72
12. Durban case studies	74
Vision and targets for Durban	78
List of acronyms	79

Foreword

Cllr Mxolisi Kaunda, Mayor – eThekweni Municipality

Cities are not islands; we rely on learning and sharing among each other to transcend and overcome barriers and challenges. EThekweni Municipality, through our Municipal Institute of Learning (MILE), has been playing a prominent role in co-ordinating and sharing learning on critical issues, such as sustainable development and good governance with cities in South Africa and across the continent. Climate change is currently one of the greatest threats facing humanity and it is critical that we work together and learn from each other to accelerate action in our cities.

The Paris Agreement called for a global shift to limit temperature increase to 1.5°C. To achieve this, there needs to be a global shift towards carbon neutrality by 2050, while we continue to build resilience and adapt to a changing climate. EThekweni Municipality, through its strategic partnership with C40, has developed a Climate Action Plan (CAP) that sets out a pathway to reduce emissions by 80% by 2050, and has pledged to continuously revise this to achieve net zero carbon. The plan aims to strengthen our adaptive capacity and protect all our citizens from the impacts of climate change. Achieving this ambitious plan will be done in an inclusive way, to take advantage of new, untapped opportunities that will create jobs.

The plan recognises that eThekweni Municipality cannot achieve the ambition set out in the CAP alone and will rely on establishing strong social compacts between government, labour, business and civil society. It is in this spirit of sharing experiences and knowledge that the Durban Climate Action Plan Learning Journey is rested. EThekweni Municipality, through this Learning Journey, shares the challenges and lessons learned in developing a CAP. The City



would like to use the opportunity with the Learning Journey to build a platform to continuously engage other cities and to drive African innovation and solutions to the climate challenge.

I am confident that this publication will inspire people to engage with each other and will ignite change. We must be determined to take the bold and transformative steps that are urgently needed to shift the world onto a sustainable and resilient path. As African cities, we are ready to lead in this space. The world must know that we are not waiting. The Continent is aware of its cause and the future it wants. A transformed future for us is in sight and working together as we walk this journey will yield endless possibilities.

Foreword

Dr Ngubane, Chief Learning Officer – eThekweni Municipality

Advancing learning is critical in any dynamic developing city that seeks to position itself in the global economy. The City of Durban is no different and has, over the past two decades, shared its experiences and good practices with cities and organisations around the world. The ethos of sharing lessons, promoting learning and bringing together valuable roleplayers in this space has been a focus in terms of the global learning agenda. This function has been the mandate of the Municipal Institute of Learning (MILE), which was established in 2009 as a part of the knowledge management strategy for the City. Collaboration and partnerships have provided a key platform in learning and bringing innovative good practices to the City.

It has been a great privilege for the City of Durban, a forerunner in climate change action, to be selected as the first African City by C40 Cities Climate Leadership Group (C40) to compile a Climate Action Plan (CAP) that is aligned to the Paris Agreement. MILE, in its mandate to share knowledge, recognised the importance of documenting this milestone to produce this knowledge management product. This publication was conceptualised and completed by a dedicated team from eThekweni and C40. Their collaborative efforts are a result of a partnership synergy that culminated in this publication. It is hoped that it will enable other cities to learn from our challenges, and more importantly, the lessons learnt during the CAP journey. We hope that this partnership with C40 is extended beyond this publication to create networks that build technical knowledge to ensure that support is available to cities that are embarking on a similar journey.



I am optimistic that this publication will inspire and enthuse cities to continue contributing positively towards climate actions while achieving alignment to the Sustainable Development Goals (SDG). Climate Action (SDG13) recognises the need to take urgent action to combat climate change and its impacts. This provides an excellent opportunity for Durban and other cities to explore multi-faceted, innovative actions that address diverse needs. It is possible that with a strong political will and collective action, our City will make great strides in contributing positively to the lives of all its citizens and ultimately transforming our City and positively contributing to other cities nationally and globally.

“

Education is the most powerful weapon you can use to change the world.

Nelson Mandela

”

Foreword

Mr Hastings Chikoko, Regional Director for Africa – C40 Cities Climate Leadership Group

The clear message coming from the available science, latest extreme weather events, climate marches and the global voices is that: We are in a climate emergency and need to act urgently to limit global average temperature increases beyond 1.5°C while reducing the impacts of climate change. There is a small window of opportunity to turn the climate crisis around. To achieve this mammoth task requires state and non-state actors to work collectively to scale up climate action in cities.

The dynamics in African cities requires more interaction and knowledge exchange among cities. C40 Cities Climate Leadership Group (C40) has always believed that the best advice a city official can get is from another city that is solving the same problem. C40 has therefore provided cities with opportunities to share solutions and curated best practices so that they can learn from each other and overcome barriers to action. By learning from each other cities are enabled to accelerate planning and implementation. The Durban Climate Action Plan Learning Journey is an excellent report that serves this purpose.

Durban is the first African city to publish a 1.5°C Climate Action Plan (CAP), which outlines a pathway for the City to transition to carbon neutrality and climate resilience in a just and inclusive way. The process that the City underwent was documented and compiled in this learning journey. This was done to share Durban's experiences and lessons in what is a very ambitious



and challenging process for many global and regional cities. We hope that this will motivate and provide other cities with practical advice on developing their CAPs.

I would like congratulate Durban for their hard work and effort to make this possible. I look forward to working more with the City to accelerate peer to peer learning and knowledge exchange across the continent as we race to complete and implement our transformational CAPs.



Executive Summary

Climate change is a global issue that is no longer something of the future; it is now upon us and we need to act. The science is clear that human-induced climate change requires urgent action and cities have recognised the need for bold action. In 2016, nations across the world ratified a global agreement on climate change, the Paris Agreement.



The city of Durban, which falls within the jurisdiction of eThekweni Municipality, is internationally recognised as a pioneer of local climate change response. In 2015, Durban joined the C40 Cities Climate Leadership Group (C40), which is a network of global megacities that are taking bold climate action. The city of Durban is one of eight global megacities and the only African city that has been selected to participate in the Deadline 2020 pilot project to develop a 1.5°C Climate Action Plan (CAP). The development of the CAP is intended to accelerate the City's ambitious climate change targets to bring about transformational change, environmental sustainability and resilience.

Embarking on the journey of developing the CAP for Durban was an arduous task for the project team. The City's Municipal Institute of Learning (MILE) identified an opportunity in terms of its mandate as the centre of learning to document and share the combined wealth of knowledge and experiences gained during this process. This publication highlights the challenges, experiences and lessons learnt and provides insightful information about resources, timelines and partnerships that other roleplayers may consider. In terms of knowledge

sharing, it is recognised that each city is unique in terms of its climate challenges and responses, hence this publication is not prescriptive.

The structure of this learning journey mirrors the steps that were applicable to Durban's context when compiling the CAP. The content provides a status quo of developing climate change in Durban as well as the policies and processes that were used to shape the CAP. An important learning aspect was the need for collaborative efforts and the evolving roles that the various stakeholders in the climate change arena play in sustainable and resilient climate actions. A common thread to note throughout the journey was the multifaceted approaches to managing data and resources. Inclusivity of all stakeholders emerged as a contributing factor to a transparent and well-received CAP. The success of any strategy is dependent on commitment at all levels and this was clearly evident during this CAP and learning journey process.

The intention of this publication is to encourage city-to-city collaboration and encourage knowledge transfer that supports and builds capacity.



Background to Durban

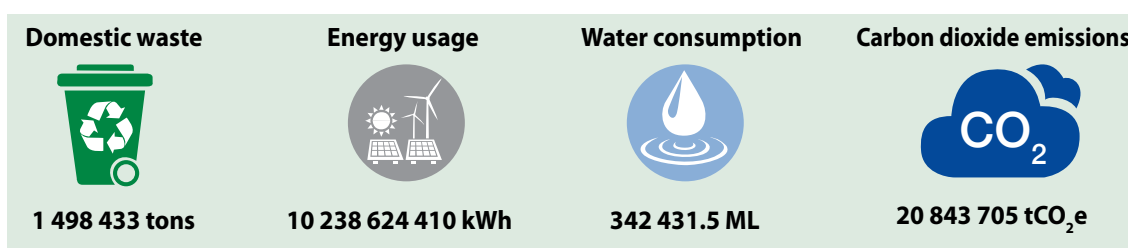
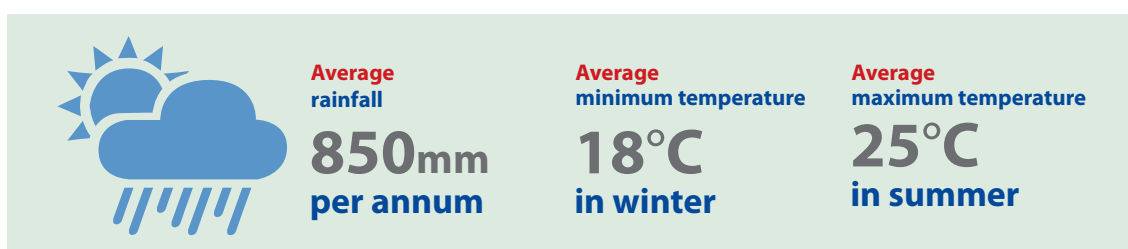
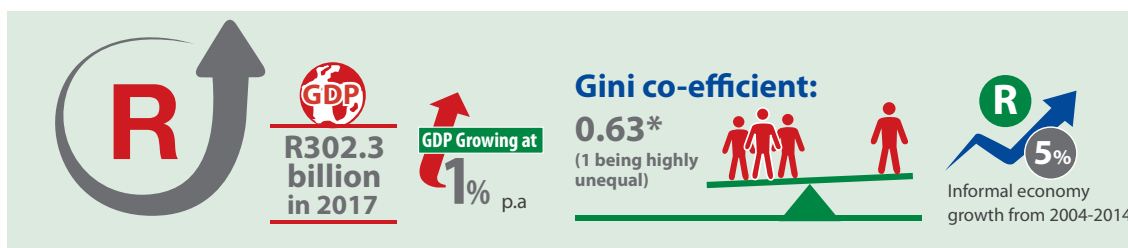
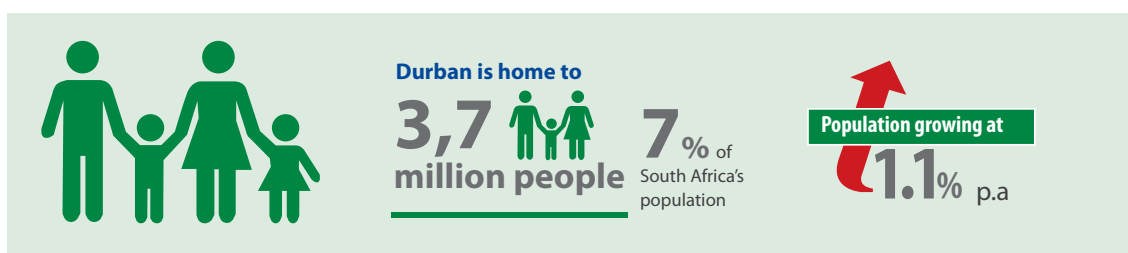
Durban is a city in the province of KwaZulu-Natal situated within the east coast of South Africa. It is the third largest city in South Africa and is home to the busiest port on the African continent. Durban is bordered by the Indian Ocean to the east with a warm Agulhas current bringing in the balmy weather all year round, and bordered by the Drakensberg mountains in the west.

The eThekweni Municipality governs an area of 2 556km² that includes urban and rural landscapes, resulting in complex socio-economic, environmental and governance challenges. The predominantly spoken languages in the province

are isiZulu and English. The City is administratively governed by the eThekweni Municipality that is headed by the City Manager. Durban is home to the iconic Moses Mabhida Stadium, which was designed as a sustainable recreational and multi-faceted sporting venue that represents the success of the City and the country as a whole in being the first African Country to host the FIFA Soccer World Cup in 2010. The stadium is highly recognised for its implementation of climate friendly technologies and initiatives such as the recycling of waste, energy efficiency and photovoltaic panels. The City falls within one of the global biodiversity hotspots.



Durban at a Glance





Introduction

Background to climate change

Climate change is the change in global and regional weather patterns, particularly apparent changes from the mid-to-late 20th century, as a result of an increase of greenhouse gases (GHG) in the atmosphere. The increase in GHGs is mainly attributable to human activities such as changes in land use through deforestation, agriculture and the burning of fossil fuels.

The impacts of climate change will vary around the globe, with developing countries most affected. Changes include increases in temperatures and rainfall patterns, which could lead to a range of impacts, including:



More frequent and extreme storm and flood events



A rise in sea levels



Exacerbated drought occurrences



At risk water and food security



Adverse health impacts



To respond to the growing climate change threat, the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the

Parties 21 (COP21) committed to signing the Paris Agreement, where nations agreed to limit global warming to well below 2°C.

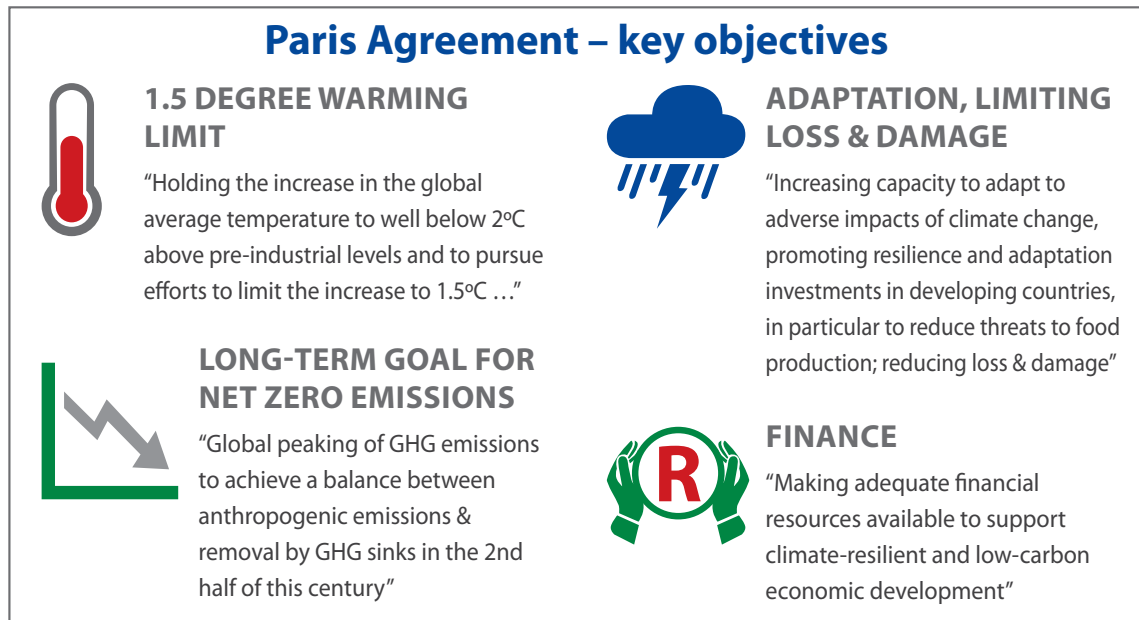


Figure 1: The key commitments of the Paris Agreement

Source: <https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement>

Mark Watts, Executive Director of C40 Cities and Cllr Mxolisi Kaunda, Mayor of eThekweni Municipality at the C40 World Mayor's Summit in Copenhagen.



Cities and climate change

Cities play a major role in responding to the global commitment outlined in the Paris Agreement through mitigating climate change, and are also extremely vulnerable to the effects of climate change. Seventy percent of global GHG emissions are attributable to cities and 70% of cities are already dealing with the effects of climate change. These effects include loss of lives and infrastructure and are resulting in significant financial losses.

Cities need to respond urgently to build resilience and transition towards carbon neutrality to limit global

temperature increases and the resulting devastating impacts.

International Non-Governmental Organisations (NGOs) are playing a major role in supporting cities with developing and implementing strategies, policies and plans to enable transformational change. C40 launched Deadline 2020, which outlined the level of emissions reductions and pathways needed to ensure that C40 cities deliver action consistent with meeting the 1.5°C ambition of the Paris Agreement. Figure 2 outlines how Deadline 2020 aligns with the Paris Agreement.



Figure 2: Aligning the Paris Agreement with the C40 Deadline 2020 commitment

Source: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>
https://www.c40.org/other/deadline_2020

Cities across the world are developing CAPs that respond to the Paris Agreement and the C40 Deadline 2020 commitment. Durban was one of the pilot cities that responded to developing a CAP.

Purpose of this Learning Journey

The Durban CAP Learning Journey seeks to share knowledge, including challenges and lessons, to contribute to peer-to-peer learning across cities. The document details the experience of the eThekweni Municipality climate change team in developing its CAP, with the hope that our learnings will be useful

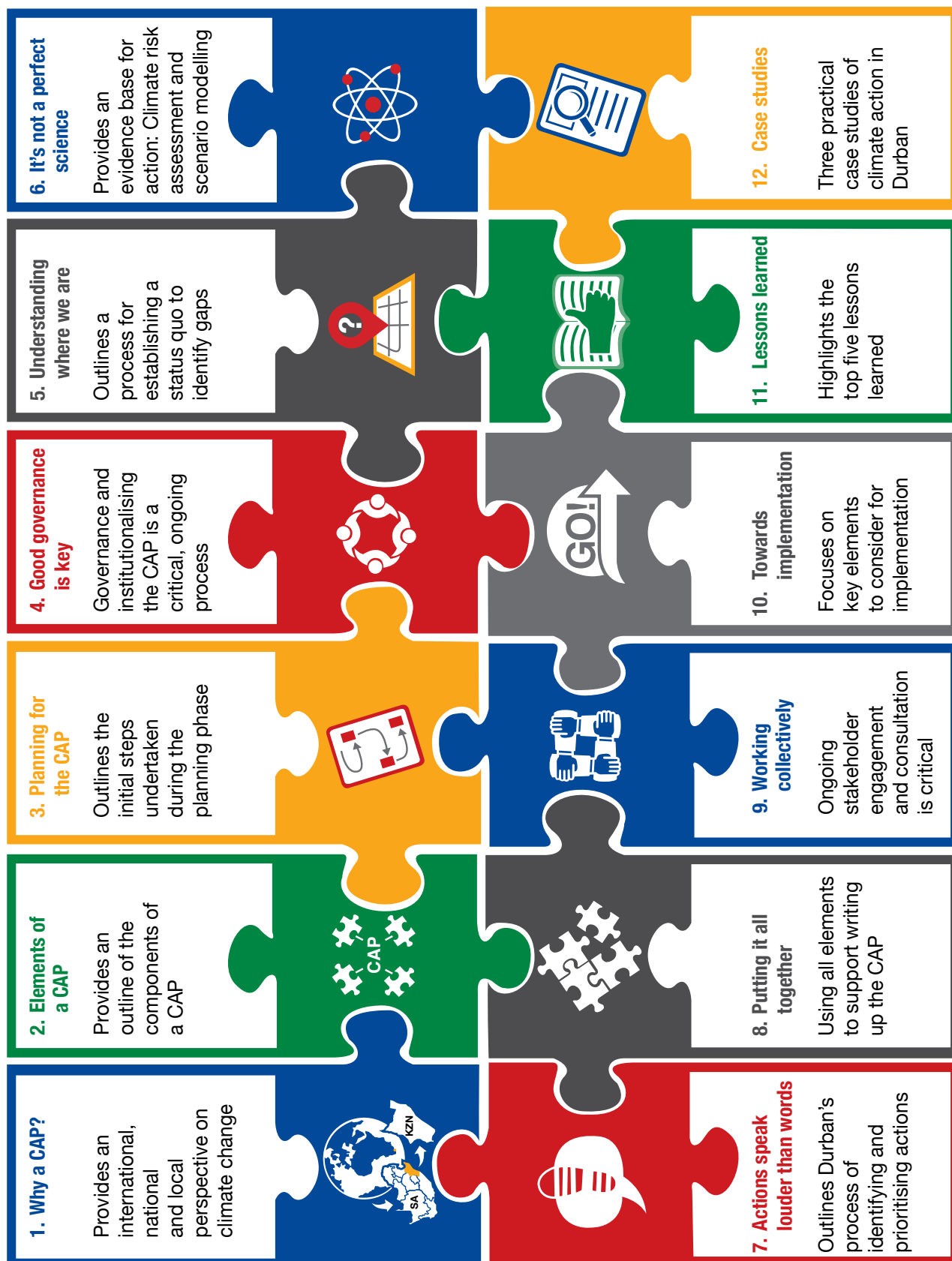
to other cities embarking on a similar process. While there is no one-size-fits-all solution and every city's journey is different, there are commonalities across cities that may be beneficial.

Target audience

This learning journey is intended for local governments seeking to develop a CAP. Particularly, it will be helpful to officials within a city that are embarking on developing a CAP, but also to consultants who are working with cities and any other interested parties.



Structure of the learning journey



1.

Why a Climate Action Plan?



Climate change in the global, national and local context

International and national priorities and climate change objectives play an important role in shaping Durban's CAP. An action plan that is aligned with international and national government policies will enable opportunities for support and ensure that local actions contribute to international and national goals.

The global response to climate change was contextualised in 2015 by the UNFCCC COP21, which concluded with the Paris Agreement, a legally binding Framework for all countries to take action.

The national climate change response in South Africa has evolved over time and gradually sought to mainstream and increase the level of climate-related action. South Africa's climate change response is directed nationally by the National Climate Change Response Policy (NCCRP), which documents the vision and policy of the South African government for developing an effective response to climate change and moving towards

a low carbon economy. The main objectives of the NCCRP are to create a platform to drive the management of climate change impacts through various interventions (i.e. adaptation response) and to reduce the greenhouse gas (GHG) emissions that South Africa produces (i.e. mitigation response).

While it is clear that national government is clearly committed to climate action, the ambition for mitigation is limited to the context of a developing country, prioritising developmental challenges of poverty, inequality and unemployment.

Apart from the NCCRP as an overarching strategy guiding national climate change initiatives, there are a number of other plans and policies that also have climate change implications. Importantly, the National Development Plan 2030 focuses on enabling sustainable and inclusive development, setting out a vision for 2030. From a city perspective, there is a need to explore opportunities to adopt city actions in Nationally Determined Contributions (NDCs) and Nationally Appropriate Mitigation Actions (NAMAs). Figure 5 summarises national policies that respond to or have an impact on climate change in South Africa.



Source: unfccc.int



The City of Durban is well-known for its pioneering work in climate change and was the first city in Africa to host the UNFCCC COP17 in 2011. A significant output from this convention was the Durban Adaptation Charter (DAC) signed by 107

mayors and city officials from local governments globally. The DAC commits local governments to climate action that will assist their communities to respond to and cope with climate change risks, thereby reducing vulnerability.

International, national and local policies and frameworks

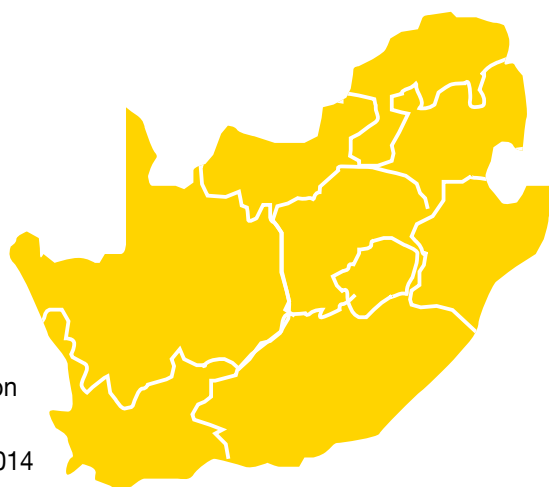
International Agreements

- Global Commission on Adaptation Report 2019
- Inter-governmental Panel on Climate Change Special Report on Global Warming of 1.5°C
- Paris Agreement 2015
- Sustainable Development Goals 2015
- New Urban Agenda (Habitat III)
- Global Covenant of Mayors
- Sendai Framework for Disaster Risk Reduction 2015
- Durban Adaptation Charter 2011



National Policies

- Pathways to a Just Transition (in progress)
- Integrated Resource Plan (IRP) 2019
- Carbon Tax Act 2019
- Draft National Climate Change Adaptation Strategy 2019
- National Greenhouse Gas Emission Reporting Regulations 2019
- Climate Change Bill 2018
- Green Transport Strategy for South Africa 2018 to 2050
- South Africa's Nationally Determined Contribution
- Disaster Management Amendment Act 16 2015
- Updated Integrated Coastal Management Act 2014
- The National Development Plan (NDP) 2013
- SA National Government's National Climate Change Response White Paper 2011
- The Long-term Mitigation Scenarios 2009



Local Policies

- EThekweni Municipality's Integrated Development Plan
- Long-term Development Plan
- EThekweni Municipality Municipal Spatial Development Framework (SDF)
- Durban Climate Change Strategy
- Economic Development and Job Creation Strategy
- Durban's Resilience Strategy



Aligning the C40 Climate Action Framework, the Sustainable Development Goals (SDGs) and the National Development Plan

Climate change action needs to take into consideration the global drive to meet the United Nation's Sustainable Development Goals (SDGs). The SDGs are an innovative and complementary framework for accelerating action and achieving ambitious sustainable development objectives. A series of 17 global SDGs have been agreed upon that are to be universally achieved. SDG 13, 'Climate Action', specifically recognises the need to "take urgent action to combat climate change and its impacts". However, climate change is embedded in many of the other SDGs indicators and targets. While in most cases the SDGs align well with responding to climate change, in some instances there are trade-offs. For example, achieving SDG 6, 'Clean Water and Sanitation', can have negative impacts on climate change mitigation through a higher demand for energy. Therefore, at a local level, it is important to ensure that these trade-offs are recognised and minimised.

Figure 3 illustrates the alignment between the C40 CAP Framework (which outlines what cities need to achieve to meet the Paris Agreement), the SDGs and the NDP. Interestingly, if cities develop a CAP that responds to the four criteria required in the C40 Framework, they will be addressing most elements of the SDGs and the NDP, especially the social ones, by ensuring inclusivity.

C40 CAP components

Emissions neutral

Develop a pathway to deliver an emissions neutral city by 2050 at the latest

Resilience to climate hazards

Demonstrate how the city will adapt and improve its resilience to climate hazards that may impact the city now and in future

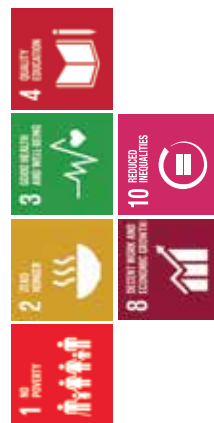
Inclusivity and benefits

Outline the social, environmental and economic benefits expected from implementing the plan, and improve the equitable distribution of benefits

Governance & collaboration

Detail the governance, powers and the partners who need to be engaged in order to accelerate the delivery

SDGs



NDP chapters

- Transforming human settlements (Ch 8)
- Economic infrastructure (Ch 4)
- Environmental sustainability and resilience (Ch 5)

- An integrated and inclusive rural economy (Ch 6)
- Transforming human settlements (Ch 8)
- Economic infrastructure (Ch 4)
- Health care for all (Ch 10)
- Environmental sustainability and resilience (Ch 5)

- An integrated and inclusive rural economy (Ch 6)
- Transforming human settlements (Ch 8)
- Social protection (Ch 11)
- Economy and employment (Ch 3)
- Improving education, training and innovation (Ch 9)
- Healthcare for all (Ch 10)
- Environmental sustainability and resilience (Ch 5)
- Building safer communities (Ch 12)

- Policy making in a complex environment (Ch 1)
- South Africa in the region and the world (Ch 7)
- Building a capable and developmental state (Ch 13)

Figure 3: Alignment of C40's Climate Action Planning Framework to the SDGs and the National Development Plan.

Source: Durban Climate Action Plan 2019

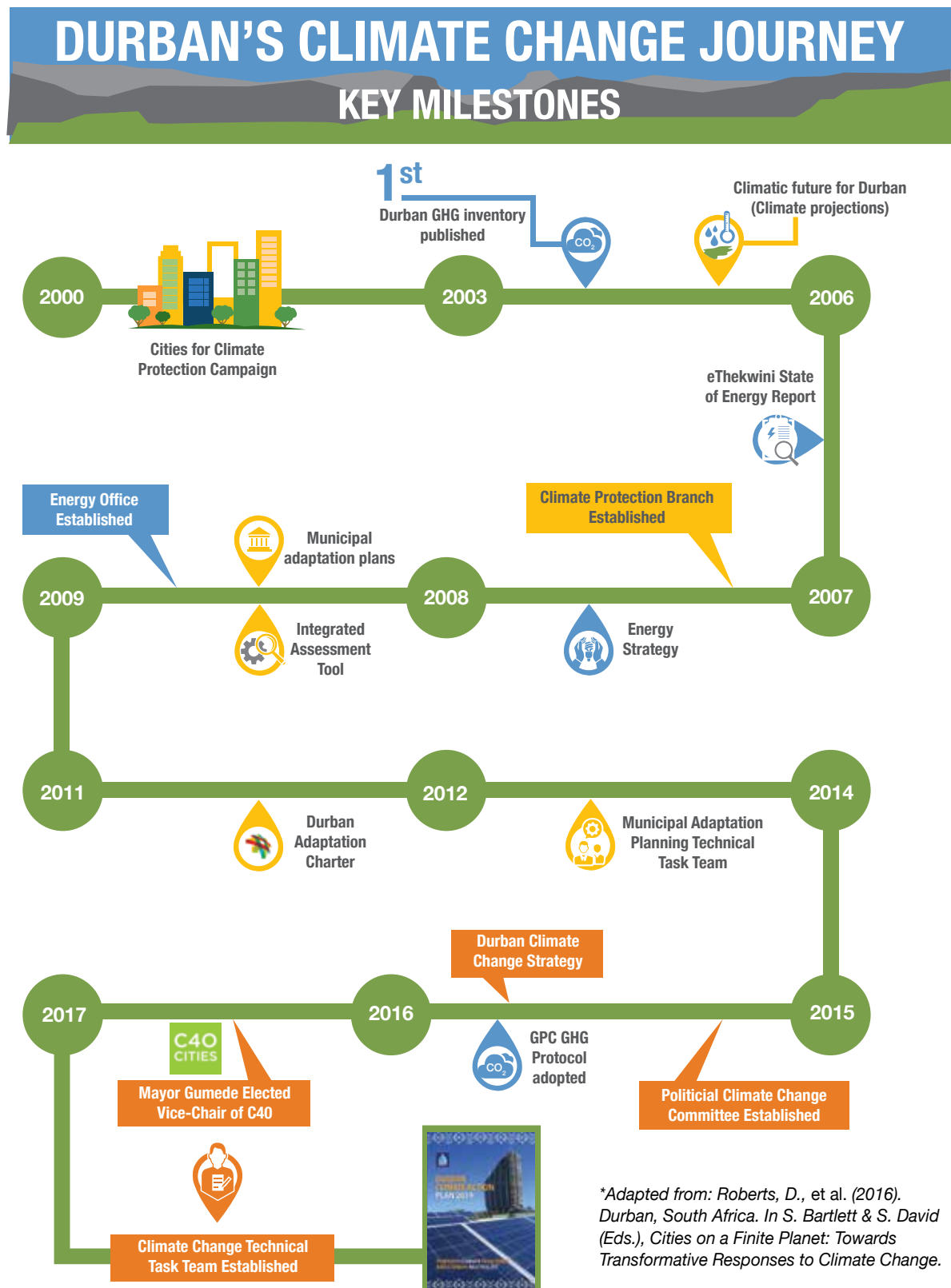
Responding to global risks

Durban's climate response needs to also take into account economic and business drivers to climate action. The 2019 *World Economic Forum's Global Risk Report*, represented by a multi-stakeholder group, states that "the world is most likely sleepwalking into a catastrophe" in relation to environmental risk. The three most significant risks cited in this report are extreme weather events, failure of climate change mitigation and adaptation and natural disasters. Noted also are the significant interlinkages of climate change to social issues, including food and water crises, as well as large-scale involuntary migration. Urgent and collaborative action is needed to mitigate the impacts of human activities on the environment.



Durban's climate change journey

Durban has a long history of responding to climate change. The infographic provides a summary of Durban's climate change journey prior to developing the CAP.



2.

Elements of a Climate Action Plan



Components of a CAP

The Durban CAP was guided by the C40 CAP Framework. The Framework outlines the essential components of a CAP to deliver a low-carbon resilient city consistent with the Paris Agreement. The city of Durban focused on the four key

components in Figure 4 to develop an ambitious CAP that responds to the requirements in the Framework. This approach will enable Durban to address its climate needs and other important SDGs associated with an economic, social and environmental focus.



Figure 4: Components of a 1.5°C CAP

Pillars for climate action planning

The Framework provides a guide to the steps that a city needs to follow to develop CAP while ensuring that the Plan is aligned to the Paris

Agreement. The Framework is guided by three pillars, namely commitment and collaboration, challenges and opportunities, and acceleration and implementation, which are fundamental to ensuring an evidence-based CAP that is implementable as described in Figure 5.



1. Commitment and collaboration

focuses on the governance and coordination of the plan and the need for community and business engagement, and communications throughout the plan's development and implementation.



2. Challenges and opportunities

considers the evidence base and existing city conditions, including: baseline emissions, 2050 emissions trajectory, climate risk and socioeconomic priorities.

3. Acceleration and implementation

defines the transformational action and implementation plan, including the development and prioritisation of actions and the processes of monitoring, evaluation, reporting and revision.

Figure 5: Pillars for climate action planning (C40 CAP Framework)

Process for developing a CAP

To achieve the objectives supporting the pillars, the Framework also outlines a process for developing a CAP (Figure 6). Durban followed the recommended process, but importantly recognised that an initial step for conceptualisation and planning for the CAP is essential to lay the foundation and ensure that all involved stakeholders have shared objectives and expectations. The stages include: conceptualisation and planning; GHG emissions and climate risk assessment; action and plan development (including writing up the plan); and CAP review.

Conceptualisation and Planning: It is important to begin the development of a CAP by ensuring political commitment, establishing a working group and outlining a clear workplan with timelines and roles and responsibilities.

Understanding Where We Are: The CAP Strategic Review is a process that seeks to inform the development of a city's CAP that is compatible with the goals of the Paris Agreement. It provides an understanding of the status quo of climate change in the city and highlights gaps in existing strategies and plans linked to meeting the ambition set out in the Paris Agreement.

Durban's climate action planning process

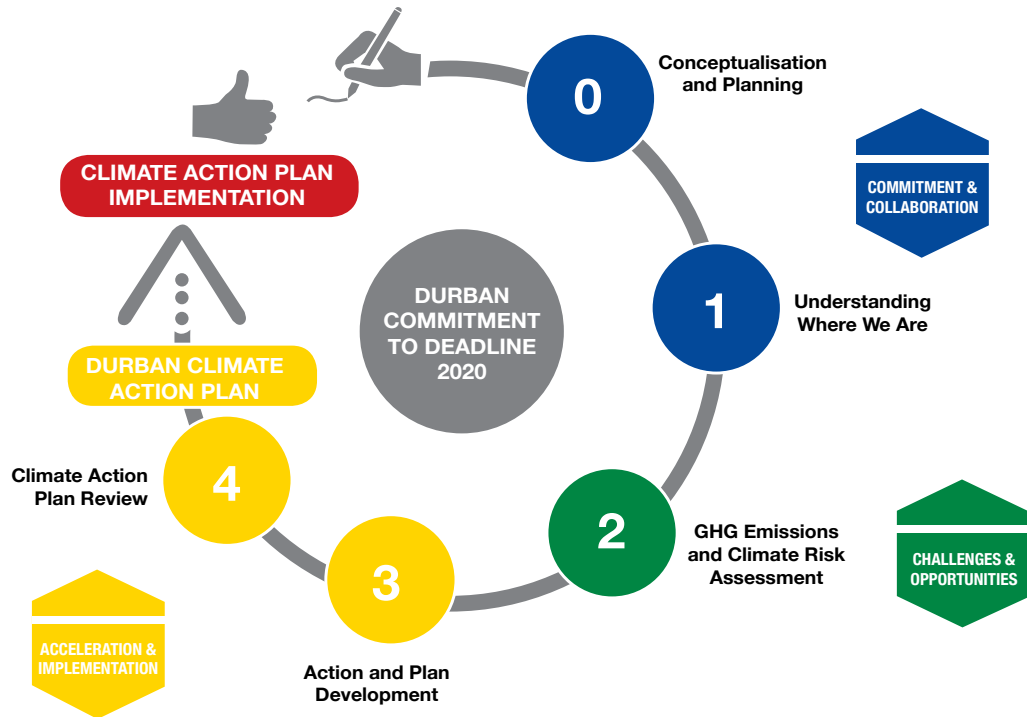


Figure 6: Process for climate action planning adapted from C40 CAP Framework

GHG Emissions and Climate Change Risk Assessment (CCRA): The GHG emissions scenario modelling and CCRA forms the evidence base to inform the climate actions. The model, which is used for simulating a GHG emissions scenario, calculates and projects a 'Business as Usual' (BAU) emissions for a city as well as outlines an ambitious yet achievable 1.5°C pathway. The CCRA seeks to understand the likelihood of future climate hazards and the potential impacts of these hazards on cities and their inhabitants to inform the actions that the city should undertake to build resilience.

Action and Plan Development: This component aims to develop, identify and prioritise actions to

achieve a 1.5°C pathway towards carbon neutrality and climate resilience. The actions are to be included in the city's CAP. The CAP should be informed by both the emissions modelling and CCRA prioritising mitigation and adaptation actions that are founded on the evidence base. To maximise efficiencies and minimise risk, climate change mitigation and adaptation should be considered in an integrated way.

Climate Action Plan Review: The final CAP needs to be reviewed by an external, independent third party to confirm that it meets the requirements to be compatible with the objective of the Paris Agreement (i.e. to limit global warming to 1.5°C).



Access the C40 Climate Action Planning Framework here:
<https://resourcecentre.c40.org/climate-action-planning-framework>

Aligning CAP with the Durban Climate Change Strategy

The C40 Framework provides cities with various options to develop a 1.5°C CAP as shown in Figure 7.

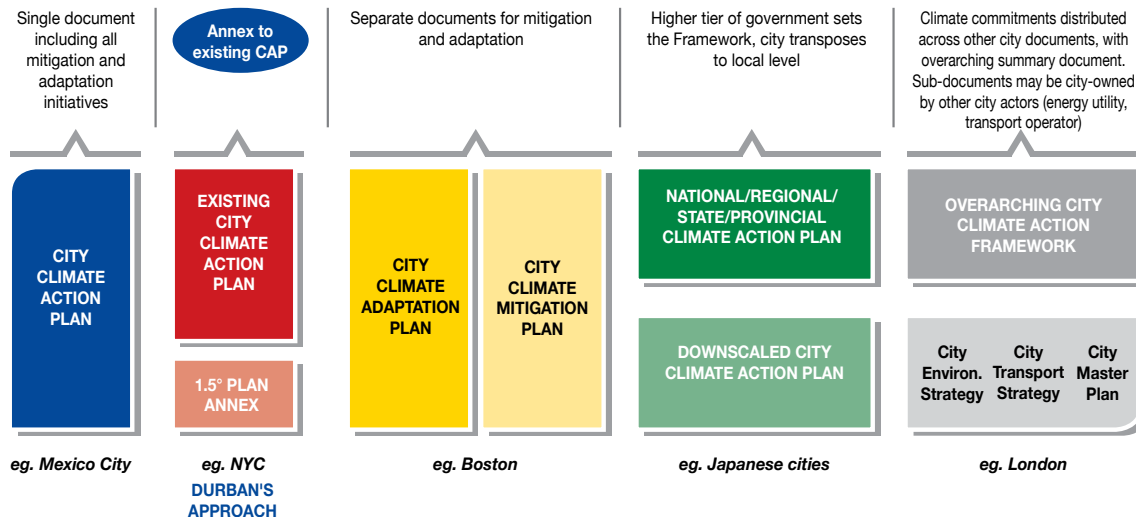


Figure 7: Approaches for the development of the CAP.

EThekweni chose to develop the CAP as an Annex to the City's existing Durban Climate Change Strategy (DCCS), which was approved by Council in 2015. The process undertaken to develop the strategy was rigorous, involving wide stakeholder engagement and included both mitigation and adaptation. The DCCS focuses on 10 thematic areas, including: energy, transport, waste and pollution, water, biodiversity, sea level rise, health, food security, economic development and knowledge generation. The Strategic Appraisal reviewed the DCCS to determine the compatibility of the DCCS to the objectives set out at the start of developing the CAP and how the DCCS aligns to the Paris Agreement. The outcomes from the review found that while the DCCS is comprehensive and well-articulated, it lacks clear targets and timelines for action, thus making implementation challenging. To align the DCCS and the CAP and to incorporate other existing plans in the City, the team adopted the approach outlined in Figure 8.

Overall Process

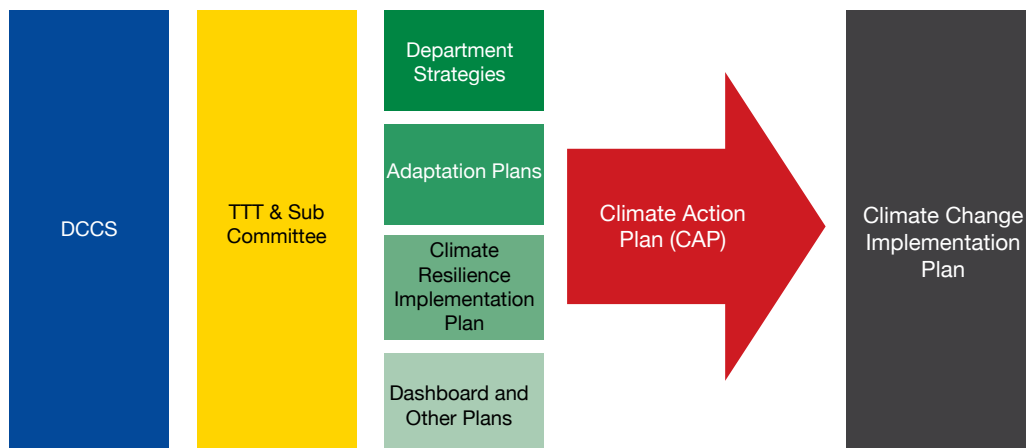


Figure 8: City policy documents used in the development of the Durban CAP

The CAP incorporated existing plans that linked to the DCCS and used existing climate change committees to inform the process.



Determine at an early stage of developing your CAP if it is going to be an annexure to an existing plan or policy, or a stand-alone document.



Durban Climate Change Strategy (DCCS)

WHAT IS CLIMATE CHANGE?

It is a change in global or regional weather patterns that are measured over decades. For example, the fourteen hottest years on record have occurred within this century. It is already affecting Durban's weather patterns by increasing flooding events and droughts. Climate change is caused by human activities such as land use change and burning fossil fuels.



WHAT CAN YOU DO?

The most important thing is to become aware of what climate change is, what its causes are, and how you can protect yourself from its impacts. Become an agent for transformation by educating others and leading by example in your community.

A FEW WAYS YOU CAN ADDRESS CLIMATE CHANGE

- Shower rather than bath
- Use water sparingly
- Turn off electronics when not in use
- Change to energy-saving light bulbs
- Use public transport or ride a bicycle
- Reduce, reuse, recycle
- Plant an indigenous garden

DCCS Themes

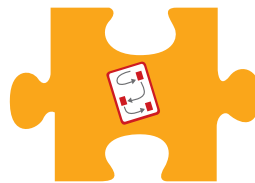


For more detailed information, visit your local municipal library, or for an electronic version of the accompanying brochure, visit our website www.durban.gov.za/DCCS

Poster summarising the themes contained within the Durban Climate Change Strategy.

3.

Planning for the Climate Action Plan



Context

There are a few steps that need to be undertaken before developing the 1.5°C CAP in order to ensure that there are systems in place for a smooth work flow. It is important to note that the following components do not follow a sequential order. Focus was placed on taking advantage of and using existing structures, processes and policies.

The steps taken during the planning phase of the CAP outlined in Figure 9, illustrate key components that Durban considered before developing the CAP. This process ensured that systems, timelines, roles and responsibilities were clearly defined.



Figure 9: Steps taken during the planning phase of the CAP



Establish a core team

Committed city officials who are dedicated and passionate about driving ambitious climate action are critical when establishing a core team to set out the strategy and agenda to develop your plan.

EThekwini Municipality recognised the need to ensure representation of both the mitigation and adaptation as part of the core team.

LESSONS LEARNED

- ✓ The core team needs to set and agree on the agenda and goals upfront to ensure that there is a clear understanding of the outcomes.
- ✓ Set clear roles and responsibilities (core team and external team), ensuring adequate administration support.
- ✓ Where possible, ensure consistency of the core team to drive continuity in the process.
- ✓ Ensure that the core team is representative of both climate change mitigation and adaptation.





Commitment

Developing a 1.5°C CAP is highly ambitious and requires a shift in the conventional way of doing things. Due to the transformational nature of the plan, it is essential to get senior level buy-in of the process and commitment to implementing the plan. Commitment at eThekweni was required at both a political and administrative level.

The City's climate change team used a range of approaches to ensure commitment to developing the action plan shown in the boxes.

Political and administrative commitment secured for the CAP

Political commitment

- The appointment of eThekweni's Mayor as Vice-Chair for Africa for C40 presented the City with an opportunity to show climate change leadership, which elevated the climate agenda.
- A signed commitment in the form of a Memorandum of Understanding (MoU) is important to ensure that the development of the CAP does not encounter challenges across departments. This helped to ensure institutional commitment.

Administrative commitment

- A management champion that is committed to driving the CAP is important to get buy-in of climate change actions at a senior level.
- The team needs to be aware of the level of commitment required to develop the CAP. It requires time and resources, which can be a challenge given the number of other priorities.

TIP



Make the commitment public, for example, the City hosted a high-level climate change launch event where commitment to the CAP was emphasised.



Working group

The Durban team used two groups to drive the development of the CAP in the City, an advisory committee and a working group. The benefit of this approach was that throughout the development of the CAP, the working group could communicate outputs with senior officials and get their advice on what was possible in the City. This provided realistic input to the CAP and also enabled the team to get cross-departmental support.

At an advisory level, the team used an existing structure, the DCCS Technical Task Team (TTT), made up of heads of department that were relevant to climate change. The TTT was used as a platform to report progress and seek advice at a senior level on the CAP. The working group focused on the actual development of the CAP and this was composed of climate mitigation and adaptation experts, the C40 city adviser, C40 CAP programme manager and a mayoral adviser on climate change. Figure 10 illustrates how the TTT and working group worked together in developing the CAP.



Figure 10: Working group arrangements use to develop the CAP

LESSONS LEARNED

- ✓ Pre-scheduled, biweekly meetings of the working group ensure that work continues, remains on track and enables challenges and delays to be documented and solutions to be identified.
- ✓ Set a clear distinction between core team and working group in terms of roles and responsibilities for the institutional arrangement of climate change.
- ✓ Ensure participation of both climate change adaptation and mitigation officials, build capacity and skills across teams.
- ✓ The working group could have benefited from being more inclusive by incorporating City officials from key sectors, particularly electricity, transport, water and waste.
- ✓ Including an external participant in the working group provides experience from international lessons and best practice to the process, which helps to steer and guide the process.
- ✓ Regular one-on-one meetings with the executive management is essential for enabling the process to move forward. This facilitates engagement with relevant sectors and departments and can help to unlock institutional barriers.





Goals and objectives

At the early stages, it is essential that a clear vision for the plan is outlined and that the working group establishes goals and objectives for the CAP. The C40 CAP Framework provided an excellent guide for setting out these goals and objectives to ensure that it is aligned to the Paris Agreement and a 1.5°C vision.

The CAP is a strategic document that outlines eThekweni's pathway to delivering ambitious

climate action by 2050. The City outlined specific goals and objectives to guide the process and ensure that the team has a common vision. EThekweni used the C40 CAP Framework and the DCCS as a guide to set objectives that are consistent with the Paris Agreement and the Deadline 2020 report. The objectives set out by eThekweni are indicated in Figure 11.

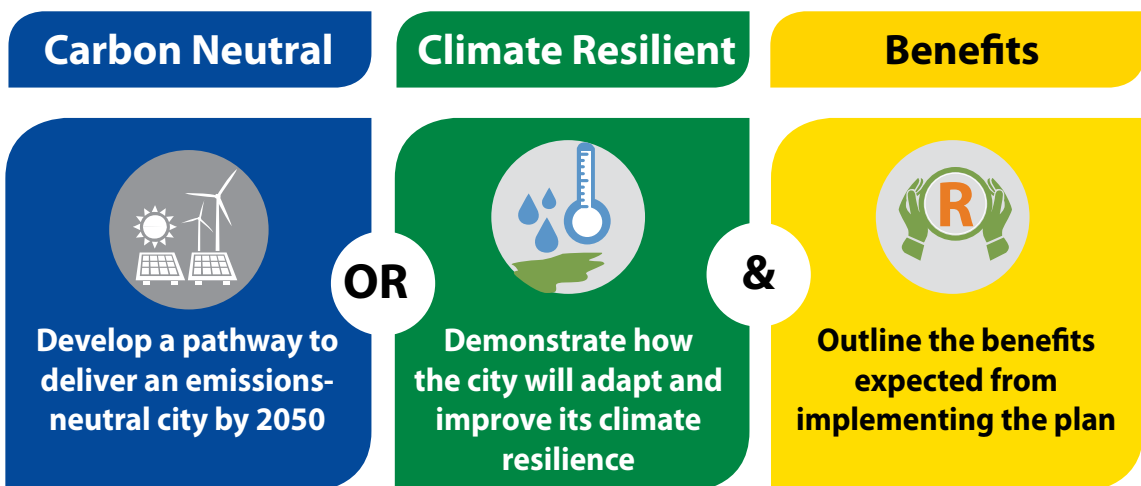


Figure 11: Objectives set out by eThekweni

Carbon-neutral Durban

To ensure that there is consistency in the approach, eThekweni aligned its definition of carbon neutrality with the C40 CAP Framework definition.

At the onset, the team realised that given the current context and after all opportunities to transition to carbon neutrality were exhausted, there would still remain some emissions in the City, so the eThekweni team agreed to make provision for carbon offsetting to address residual emissions. EThekweni also included a commitment to review the emissions gap in the future to incorporate changes in technologies and legislation.

Communicating the term and definition of carbon neutrality to stakeholders was a challenge and this needs to be carefully agreed on by the team to ensure that it is consistently and transparently communicated.

Climate-resilient Durban

Durban adopted the definition of climate resilience from the C40 CAP Framework. This component included:

- Showing how the City will adapt to and improve its resilience to climate hazards now and in the future
- Understanding our future climate projections



- and undertaking a climate risk assessment to identify priority climate risks
- Identifying strategic actions to mitigate identified risks, incorporating changing the frequency and severity of the risk

Other benefits

It is important to also outline the other social, economic and environmental benefits to be

achieved by implementing the plan. Importantly, this step provides the recognition that a CAP also provides the City with many opportunities. There is a common misconception that achieving carbon neutrality and climate resilience have negative economic impacts. Highlighting the benefits of climate actions shows that it is possible to grow the economy, create jobs and achieve sustainable cities.

LESSONS LEARNED



- ✓ Defining carbon neutrality was a point of contention in terms of what needs to be incorporated in the emissions neutrality target. This needs to be outlined at the onset so that there is a common understanding of the goal.
- ✓ For the City, the separation of resilience and adaptation was difficult to distinguish between and posed a challenge for setting out climate resilient objectives.
- ✓ Adopting the concept of inclusivity posed a new challenge, which forced the team to look at broader impacts of implementing the plan. This should be done during the early stages, which also assists with communicating the CAP to stakeholders.

TIP



- ➔ *Keep the objectives simple and align with international best practice.*
- ➔ *Highlight social, economic and environmental benefits as a goal to enable cross sectoral support for the plan.*
- ➔ *Try to align other benefits with key priorities for your city to ensure broader buy-in.*



Skills

Identifying the skills needed to develop a CAP is important to ascertain capacity and resource constraints. Where feasible, it is helpful to recruit a project manager to manage the process to ensure that the plan is developed accordingly. The skills base that worked on Durban's CAP was made up of a diverse team, including engineers, natural scientists and climate change experts. In instances where expertise is lacking, the team needs to consider acquiring a service provider to support components of the work.

The funding that eThekweni received from C40 enabled the City to secure external support in the form of a C40 city adviser. Employing a city adviser posed a challenge to the City as the post requires expertise in both climate change mitigation and adaptation. The core team ran two recruitment processes and finally selected an adviser with stronger competencies in one aspect of climate change.

In general, the team recognised that it is difficult to get a person with in-depth skills and knowledge in both climate change mitigation and adaptation and, therefore, there had to be a level of agreement and compromise. There was an 'informal' agreement that a potential adviser would be someone who would possess essential skills and qualifications, including:

- An environmental management and/or engineering degree
- Demonstrated experience in climate change adaptation and/or mitigation
- An understanding of GHG emissions scenarios and climate risk assessments
- Previous experience of working at a local government level
- Demonstrated skills with stakeholder engagement at various levels
- Communication skills at various levels

LESSONS LEARNED



- ☑ It is difficult to get someone with skills in all aspects of climate change and hence it is important to identify candidates who will complement your skills requirements.
- ☑ Having someone on the team with an economic and social science background will benefit the process to incorporate an understanding of the social and economic implications of actions as well as quantifying the costs and benefits of projections and actions.



Project plan and budget

To guide the development of the CAP, the working group developed a work plan. The work plan aligned to the objectives of the CAP and set out clear timelines, roles and responsibilities and stages in the journey. Figure 12 provides an example of eThekwin's CAP work plan. In addition to the objectives, the stages in the work plan were also guided by the CAP Framework (see Chapter 4).

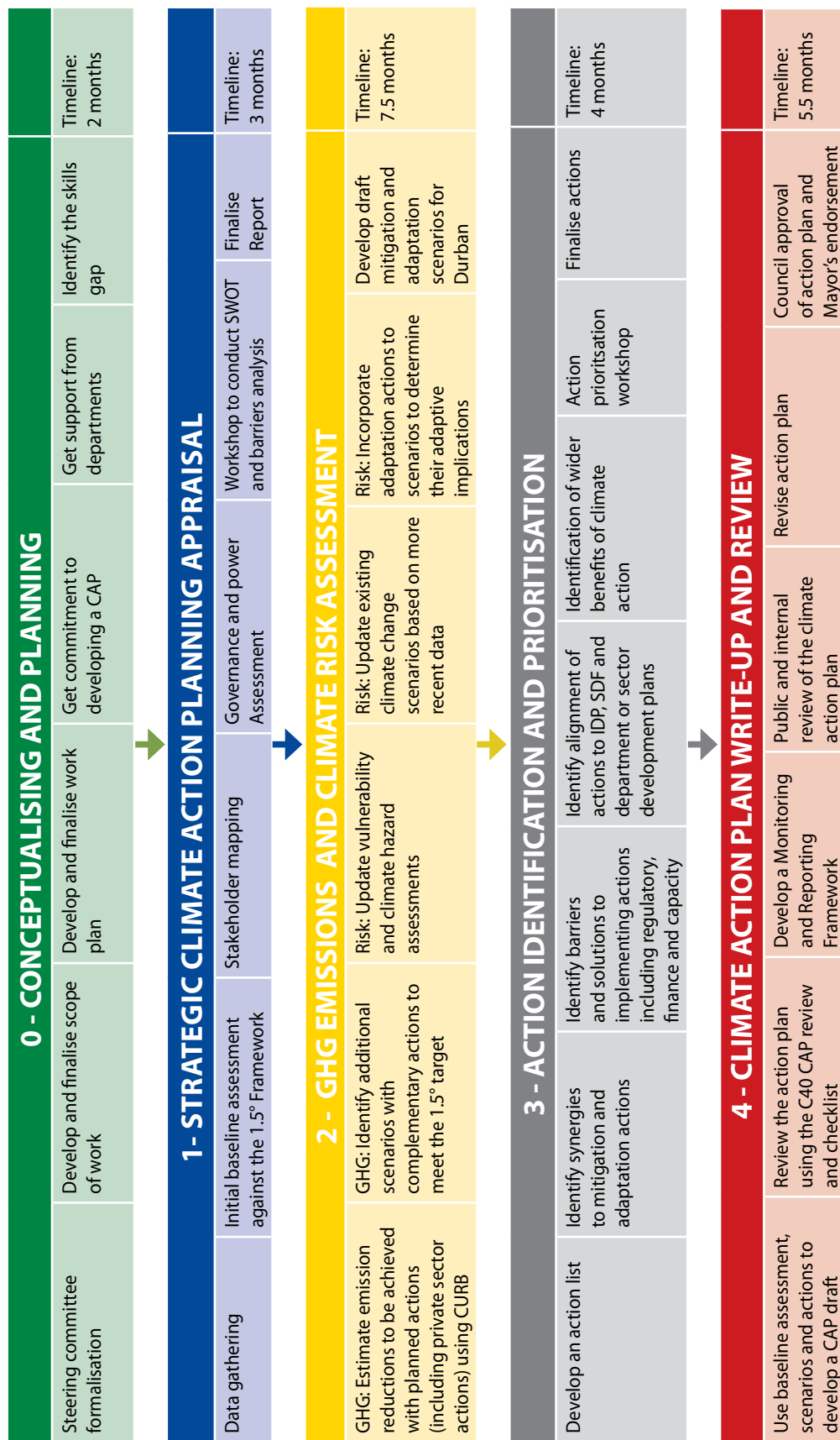


Figure 12: Example of eThekwin's work plan for the CAP

Importantly, the CAP process requires human and financial resources to develop. Linked to the work plan, a budget was also drawn up with estimated finances required for developing the CAP. Durban, being a C40 pilot city, received funding from C40 to develop the plan. Although the City received

funding, with climate change being an unfunded mandate, much of the City's climate change activities are funded through climate change projects that can deliver a reduction in operational costs and innovative mechanisms.

LESSONS LEARNED



- ☑ Continuously monitor and adjust the work plan according to project progress and be transparent on the deliverables.
- ☑ Allow sufficient time for stakeholder engagement. ... it takes longer than you think.
- ☑ Identify budgetary requirements to ensure that finances are available to develop the CAP.

TIP



- *Use online tools and resources to support the work (C40 Resource Centre and Knowledge Hub).*
- *Partner with local tertiary institutions to conduct or support aspects of the process at no or minimal costs.*
- *Partner with Non-Profit Organisations to support components of the work.*
- *Identify and use various existing platforms, workshops and meetings to present on the CAP work and get input.*
- *Have one-on-one meetings rather than workshops.*



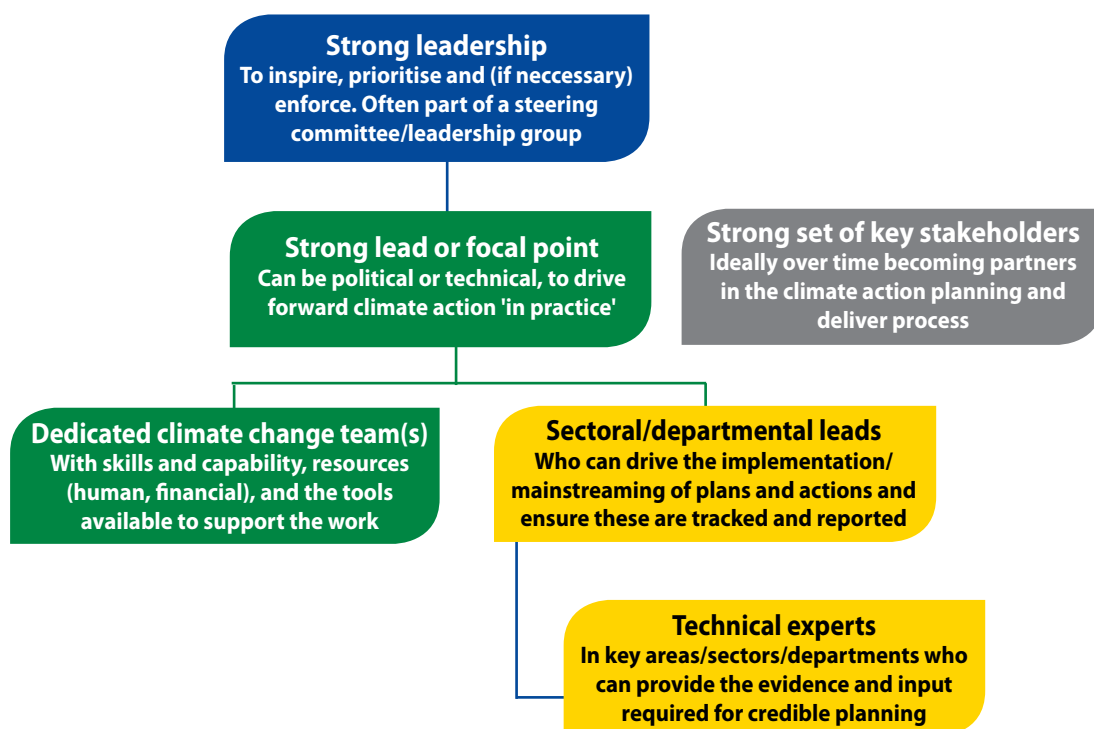


Figure 13: Structure of effective climate governance



EThekweni's approach

To enable the successful implementation of the CAP, the climate change team recognised the need to build on and strengthen existing governance structures to ensure that the CAP is mainstreamed across key clusters as well as with external stakeholders.

Currently, the climate change function sits in Durban's Environmental Planning and Climate Protection Department (EPCPD) because climate change has traditionally been regarded as an environmental issue. This makes it difficult to drive implementation across the City. However, there is a growing recognition that climate change is also a social and economic issue and cuts across various departments in the City. In order to effectively mainstream the development and implementation of the CAP, as well as the DCCS, across the City, the climate change team established a structure that would ensure input and support from relevant departments.

Establishment of the Climate Change Governance Structure

In order to enable effective governance and to mainstream climate change planning and implementation across the City's departments, a Climate Change Governance Framework was established. The Framework comprises two components (Figure 14), namely the Climate Change Committee (CCC) at a political level and the Technical Task Team (TTT) at a technical level.

The CCC

The CCC consists of 12 councillors, led by the Political Head of the municipality, the Mayor. The committee provides political oversight to the climate change activities in the City to ensure alignment with eThekweni's strategic objectives. Importantly, the CCC consists of councillors who sit on various decision-making committees linked to municipal clusters. This ensures that climate change challenges and opportunities are recognised across various clusters in the City. Mayoral oversight helps to drive attendance and participation at meetings.

The TTT

The TTT, convened at the level of Heads of Unit, represents a trans-sectoral body of municipal sectors tasked with leading the implementation and mainstreaming of climate change activities. The TTT also plays an advisory role and provides strategic direction to the climate change team, taking into consideration the realities and practical challenges faced by various sectors. In order to be relevant and participatory, the TTT requires strong leadership.

The CCC and TTT were used throughout the development of the CAP to get various sector input into the process and to share findings and outcomes from the different stages. The two committees were also used to support the implementation of the CAP, ensuring transparency in the process and securing ongoing input from relevant line departments. Table 1 highlights key advantages and disadvantages of the governance structure.

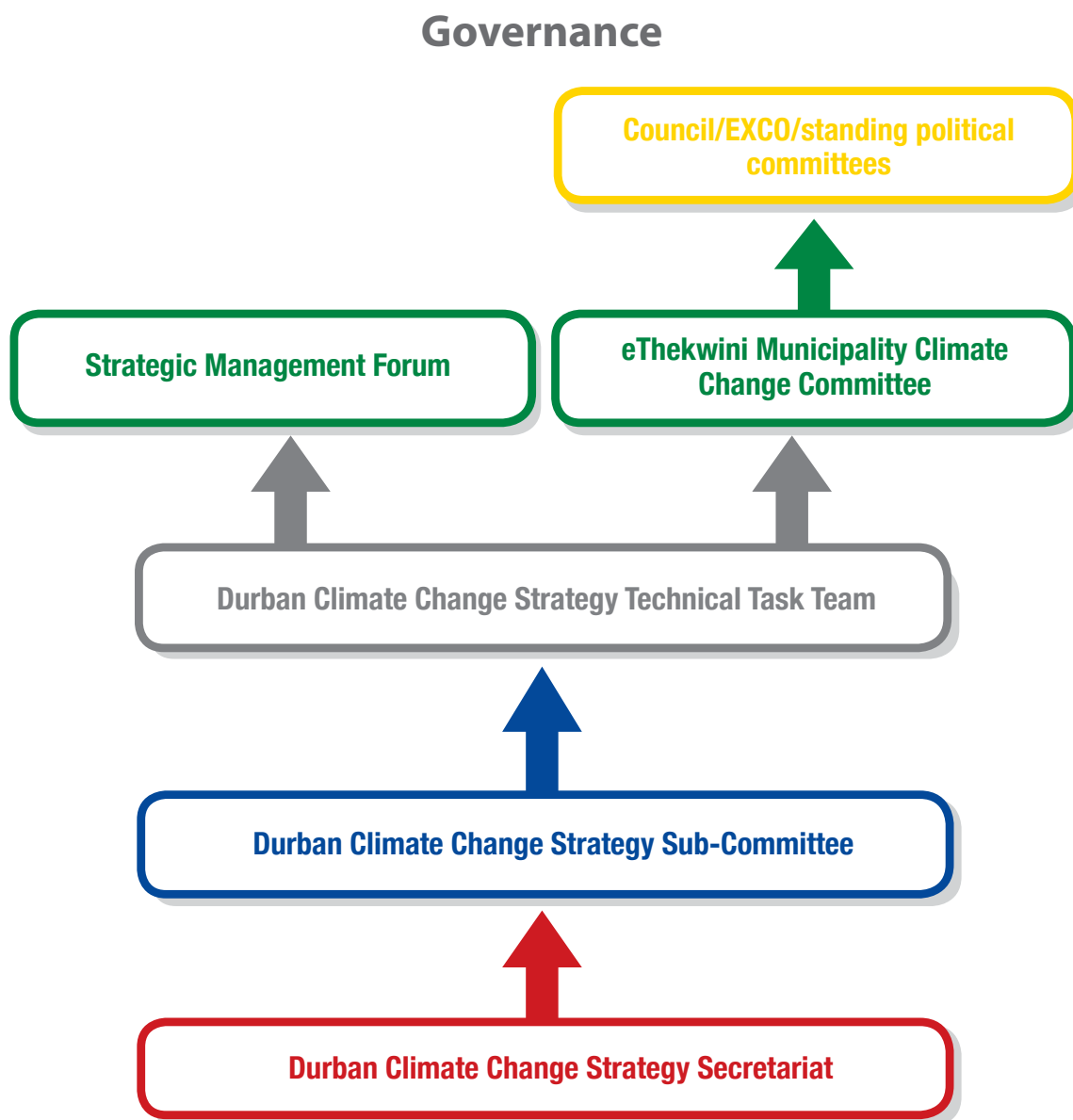


Figure 14: EThekweni Municipality's Climate Change Governance Framework

Table 1: Pros and cons of the governance structure

Pros	Cons
➤ Mayor's significant role supports the Climate Change initiative	➤ The TTT is not mandated to approve projects
➤ The TTT is an integrated forum that facilitates interdepartmental engagement and advisory support on climate change	➤ The City's governance structure limits cross-sectoral implementation
➤ The TTT and CCC increases cross-departmental climate change capacity and awareness	➤ Climate change indicators are not linked to performance management for most key departments
➤ The climate change team provides expert knowledge to the governance structures	➤ The participation and partnerships with the private sector and the community is limited
➤ Sector-based plans are built into strategy and implementation	➤ While structures are set up, climate change information is not filtered down to relevant stakeholders
➤ Those who are involved are passionate about the issue and willing to share knowledge	

Governance approach during the CAP development

During the development of the CAP, the focus was predominantly on getting political and internal administrative support of the plan to assist with implementation. This was critical as the climate change function lies in a department and is not cross-cutting. The climate change team used the existing TTT and CCC to provide consistent updates, and get regular feedback during all phases of the CAP.

The following approaches were implemented to build support throughout the process:

- **Established a core team with both mitigation and adaptation skills**
- **Pre-launch of the CAP** – To inform political leaders as well as Heads of Units to highlight why it is important for the City and the expectations

- **Ongoing, regular feedback** – Updates on the CAP were presented regularly at the CCC and TTT meetings during the development to ensure transparency and get various stakeholder input
- **Political champions were identified** – Champions played a major role to get wider political support of the CAP
- **Ongoing stakeholder workshops** – During every phase of developing the CAP the team had at least one stakeholder workshop to share and confirm findings and get additional support
- **Regular communication of the CAP in the municipal newsletter** – The team ensured that events were regularly communicated in the local newspaper, as well as on social media
- **Presented the CAP on various platforms** – Capitalised opportunities to present the CAP at various internal forums, as well as the external private sector, youth and NGO platforms



CHALLENGES

- ☒ The ability of the climate change team to influence implementation and integration of climate responses into sector plans is limited.
- ☒ Conflicting priorities from leadership in some instances limited the level of support and commitment from departments.
- ☒ Continuous external stakeholder engagement on climate change issues and opportunities was limited.

“
Link climate responsibilities to existing institutional structures and not to individuals occupying positions, to maintain institutional knowledge and ensure continuity.
”



LESSONS LEARNED

- ☑ Set up governance structures early in the process and ensure that there is ownership, buy-in, as well as transparency throughout the development of the CAP. These structures aid with mainstreaming climate change across city line functions.
- ☑ Strong leadership and political will is needed to ensure effective representation and participation from relevant sectors. Strong leaders help to get support from other key influencers in the City.
- ☑ Establish a city-wide stakeholder engagement forum to garner external stakeholder support and alignment of the CAP.



5.

Understanding where we are



Timeline
3 months
Jan – Mar 2018



Context

Durban undertook an assessment to determine where the City was in terms of climate change policies, actions and responses in relation to the requirements and ambition required to develop a 1.5°C CAP. This was termed the Strategic Review Appraisal in the C40 Framework. Durban used this process to identify:

- Gaps or weaknesses in a city's existing work that needs to be addressed
- Opportunities to strengthen the level of ambitious current targets and plans
- Any specific governance/capacity/technical challenges that need to be overcome to developing and implementing a CAP



EThekweni's approach

To understand where we are, the City identified four key focus areas that need to be assessed: Review of objectives, stakeholder mapping, city baseline and a policy, powers and barriers assessment. These focus areas were completed in parallel to culminate in a Strengths, Weaknesses, Opportunities and Threats Analysis (SWOT) as well as a Recommendations Report to facilitate developing/updating the City's CAP (Figure 15).



Stakeholder engagement
1 workshop
10 meetings with HoDs



Resources
Internal
3 staff – 1 day a week
External consultants



Further reading
Durban Climate Change Strategic Review Report Executive Summary
www.mile.org.za

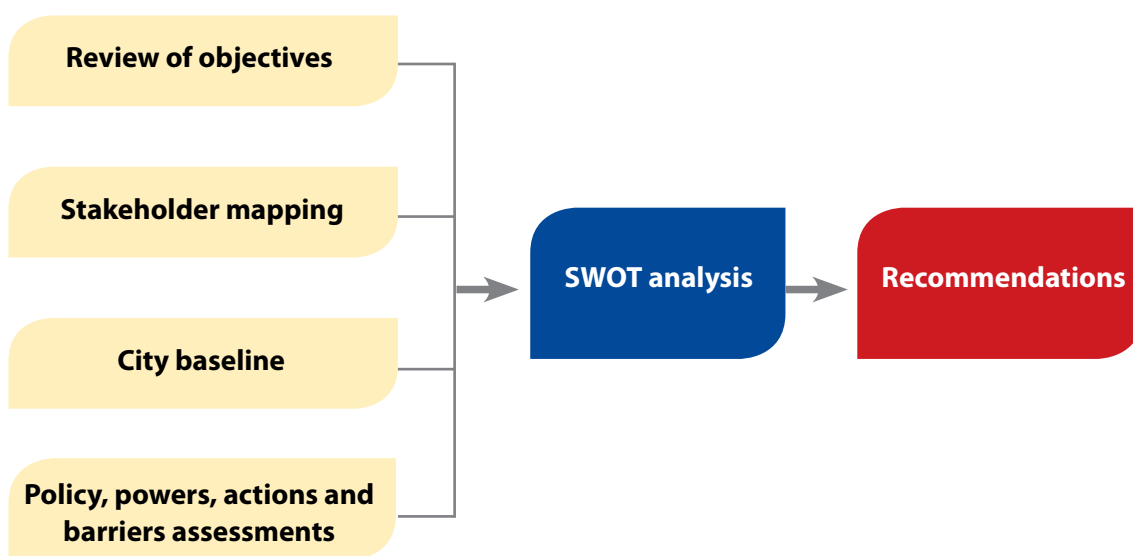


Figure 15: Components of a strategic appraisal

EThekweni's Strategic Review was completed by a service provider, with support from the climate change team with the objective of understanding the City's existing climate change work and how this compares to a 1.5°C CAP. The aim of the Review was to unpack identified gaps in the City's policy frameworks and linkages that could facilitate in the implementation of the CAP.

Undertaking the Strategic Climate Action Planning Review involved a collaborative effort among the key stakeholders involved. The process started with a data gathering exercise in order to understand and inform the review process. This data and information gathering aimed to generate a comprehensive understanding of the following:



- The 'starting situation', e.g. demographics and national and local statistics, economic profile, GDP and development priorities
- Climate change policy, issues and priorities
- Sustainable development/wider environmental objectives
- Infrastructure issues, investments, e.g. energy systems, transport systems and waste systems
- What has and hasn't already happened in terms of climate/sustainability actions in key sectors (Energy, Transport, Waste, Industry, AFOLU)
- Current adaptation work and issues/priorities
- Current work that may have climate change benefits and co-benefits

Review of objectives

Having clear and specific objectives is an important part of developing and implementing a climate action plan. These help to: (i) communicate a clear vision both internally and externally, (ii) provide a guiding Framework around which actions can be aligned, and (iii) support ambitious objectives and stakeholder commitment to a vision of a more sustainable future.

The strategic objectives already in place in Durban were reviewed against the CAP Framework. Table 2 presents the alignment between the objectives of Durban's policies with the CAP Framework strategic objectives:

Table 2: Alignment of Durban's objectives with the CAP framework

CAP Framework Strategic Objectives	Level of Alignment	Relevant Durban Policies
Achieving emissions neutrality by 2050	Medium	The Imagine Durban Action Plan was the only plan that set a goal of achieving emissions neutrality by 2050. However, the document does not outline how the City will achieve this goal or provide interim targets for getting there. It was recommended that a quantitative 'pathway' and the relevant contributions of sectors be further developed to provide greater confidence in the feasibility of achieving an emissions neutrality target.
Improving resilience to climate hazards under at least a medium global warming scenario by 2050	Medium	No targets specified but there has been considerable work on understanding vulnerabilities and improving resilience to these.
Delivering wider economic, social and environmental benefits from climate action and increasing the equitable distribution of these benefits across the City	Medium	No policy states this as a clear objective. However, many of the climate policies will highlight the co-benefits of climate work. Delivering wider social and economic benefits in an equitable manner underpins Durban's planning Frameworks, however, to support implementation of climate actions, additional linkages and identification of specific 'co-benefits' for departments should be strengthened.

Stakeholder mapping

Engaging internally and externally is essential for effective climate action planning and implementation. The review assessed the current status of external engagement of stakeholders, and internal engagement through governance and management structures.

City governments cannot deliver the scale of climate action that will be required without engaging others, for example, working with other tiers of government, the private sector, not-for-profit organisations, utility companies and citizens. Identifying all the relevant stakeholders at the start of the climate action planning process is, therefore, critical.

The stakeholders that are most relevant to city climate action in Durban were identified in a list, including their role and department. Stakeholders were also assessed to determine if they are influencers, decision-makers, deliverers, enablers or data-providers.

City baseline

The city baseline section of the review sought to collate key environmental, social and economic indicators that will be needed to inform the process of developing/updating of the CAP.

The baseline indicators showed that Durban faces many challenges, but there are also opportunities. There is a lot of good data available at the city level in Durban, and opportunities to enhance data or make use of more detailed datasets (such as disaggregated fuel consumption by district) can help to improve understanding of the challenges, help to make the business case for interventions, and then track the actions.

Policy prioritisation

Following the initial search for relevant documents, the priority documents were identified and a desktop-based review of these priority documents was performed. The findings from this were collated, then used to populate the Strategic Climate Action Planning Review reporting template. A policy mapping was completed to identify key policies. This provided a useful context to existing work in the City, how it aligns to the national context, as well as to the commitment outlined in the Paris Agreement.

Powers Assessment

The Powers Assessment was undertaken by the climate change team in Durban. The C40 Mayoral Powers Survey provides critical insight into a city's control over assets, policies and budgets. The objectives of the Mayoral Powers analysis for Durban were to provide better recommendations about where the City has the most ability to reduce emissions and identify areas where the City will need to work with other stakeholders to achieve carbon neutrality.

Specific criteria were used to develop the Powers Assessment whereby four dimensions of power were surveyed:

- Ownership and operation
- Policy and regulation setting enforcement
- Budgetary control
- Vision setting

Importantly, the powers assessment identified areas where further engagement with national government is essential to enable Durban to achieve its ambitious targets.

SWOT analysis

The process ended with a **SWOT workshop**, wherein the preliminary findings of the Strategic Review were presented and a discussion was held to further explore the issues and opportunities.

The Strategic Review generated a wide range of evidence that needed to be collated and analysed to determine the City's SWOT that can help inform strategies for developing a CAP and delivering mitigation and adaptation measures.



The SWOT analysis was the key milestone in this phase of the CAP development as it informed the gaps and further work needed to develop the CAP. The workshop was held to ensure that the analysis was inclusive and incorporated broader stakeholder views. The workshop was attended by key City sectors including, transport, electricity, waste, water, spatial planning, human settlements and risk.

Prioritisation of key strengths, opportunities, weaknesses and threats

This exercise focused on identifying strengths, weaknesses, opportunities and threats relating to implementing climate actions in Durban, which are outlined in Table 3.

Table 3: Outcomes of SWOT analysis

Strengths	Opportunities
<ul style="list-style-type: none"> City Strategy Risk Profile highlights climate change as a risk for key departments. Deputy City Managers (DCMs) and Heads of Units take responsibility to respond to risks Access to information from international organisations Awareness raising with communities – Energy Office 	<ul style="list-style-type: none"> Community engagement is a priority Develop a business plan to market climate change Maximise Durban's positive climate change position and identify strategic partnerships to enable climate change actions
Weaknesses	Threats
<ul style="list-style-type: none"> A strong case for action and effective marketing of climate change and response is missing Inadequate modelling when developing targets Gaps in knowledge to inform decision-making, for example, unknowns regarding the potential to generate enough renewable energy 	<ul style="list-style-type: none"> Failure to align sectoral actions, thus targets result in maladaptation and mitigation There is a perception that 'green' is for the elite and is expensive A national policy that is not supportive of city generation and renewable energy

During the Strategic Review workshop, the team aimed to get a broader view of what stakeholders see as critical areas for moving towards a 1.5°C compatible Durban. The participants were asked to spend five minutes writing down what a 1.5°C CAP means for their sector. Figure 16, illustrates these outputs from the visioning exercise. These outputs were incorporated into the planning and visioning of the CAP.

Visioning 1.5°C for Durban



Figure 16: Outputs of visioning exercise for the CAP

Working with consultants

Durban did not have the capacity and resources to develop the entire CAP internally and relied on consultants to support various components of the work. Working with consultants can be tricky and requires constant communication, a clear and common understanding of requirements and careful project management. Here are some lessons that Durban learned from working with consultants:

- Try to be as specific as possible when drafting the Terms of Reference on requirements, deliverables and timeframes.
- Regular project progress meetings are essential to ensure that work is going according to plan and to unblock challenges.
- Where stakeholder engagement is required, ensure that the team remains at the forefront and participates in these sessions, as this is essential to build relationships.
- Timeframes are not always met; expect and allow for some delays. Ensure that the climate team has all the necessary documents and data available for the consultant to avoid further delays.
- Careful consideration is required when choosing between local and international consultants, as both have their advantages and disadvantages. Local consultants are helpful for face-to-face engagements and have a good understanding of the local context and challenges. International consultants have the potential to deliver innovative and creative outputs that test the boundaries.

“
The Strategic Review process resulted in a detailed institutional review and collation of everything relevant to climate change in Durban, bringing it into one place and bringing teams together.”

CHALLENGES



- ☒ A lack of a shared understanding of the objectives and boundaries of the Strategic Review Process resulted in extensive outputs that were difficult to prioritise.
- ☒ The Strategic Review provided a high-level assessment of technical and resource constraints without detailing the specific requirements across departments throughout the City.
- ☒ Recommendations needed to be considerate and sensitive of City politics.
- ☒ The volume of information to assess within a limited time and budget was a challenge.

LESSONS LEARNED



- ☑ There should be a common vision and understanding of the desired expectations and outcomes of the Strategic Review Process.
- ☑ Use the Strategic Review Process to identify specific outcomes from existing policies that will inform the development of the CAP.
- ☑ Be aware of and carefully balance outcomes with political sensitivities.
- ☑ A consultant gives a fresh perspective to existing work and independent views provide more credibility to the outcomes.
- ☑ Allocate enough time and resources for the Strategic Review process to ensure specific outcomes, which inform the subsequent components of the CAP.
- ☑ Bring in your city's strategy and finance office at the early stages of the journey to ensure that the outputs are integrated in the city's strategic documents.

6.

It's not a perfect science



Timeline

Risk assessment
7 months (March
- Sept 2018)

Scenario modelling
6 months (May -
Oct 2018)



Stakeholder engagement

Risk assessment
3 workshops
40 stakeholders
engaged
Scenario modelling
1 workshop
4 departmental
meetings
30 stakeholders
engaged



Human resources

Risk assessment
Internal – 2 staff
(2 days a week)
External –
consultants
Scenario modelling
Internal – 2 staff
(2 days a week)
External – C40
support



Further reading

Updated Climate
Change Projections
for eThekweni
eThekweni Climate
Story Map
www.mile.org.za



Context

The next phase in developing a CAP is to provide an evidence base to inform the actions that a city will undertake. The evidence base comprises a climate risk assessment to inform adaptation actions and an emissions scenario modelling exercise to identify mitigation actions. No assessment will

be perfect and give you the exact result, but both the risk assessment and emissions modelling are critical in assisting the team to identify actions. It also assists with providing a business case to other key stakeholders and decision-makers on where to prioritise actions. Figure 17 provides an overview of the process undertaken to inform the actions.

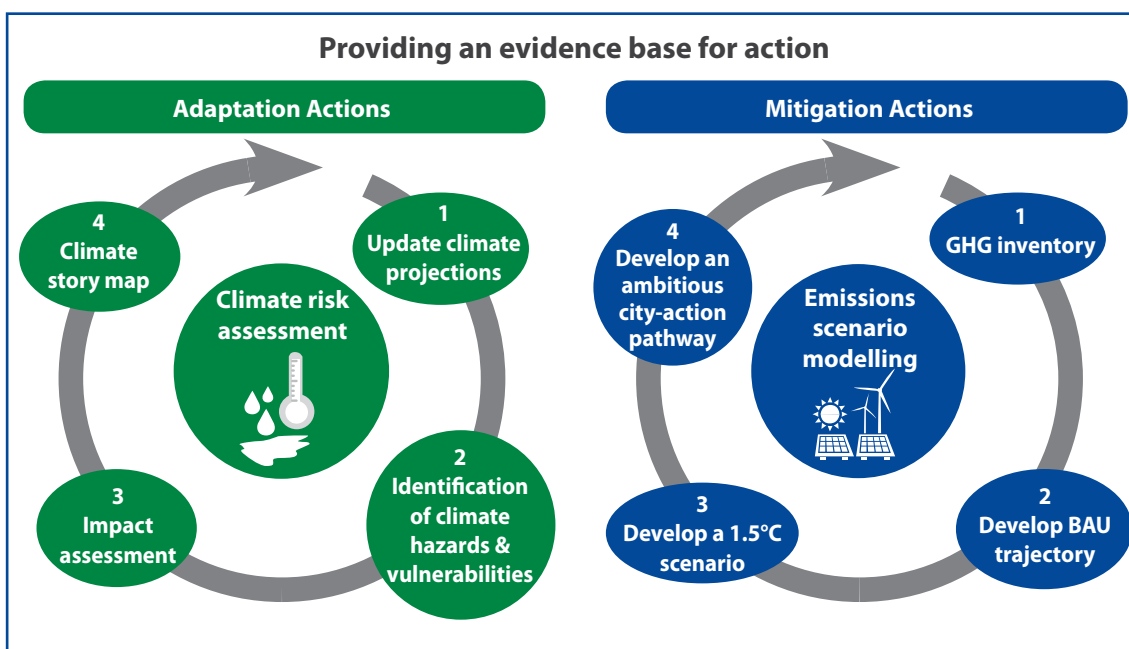


Figure 17: Process to inform actions

Climate risk assessment



eThekweni's approach

A climate risk assessment is undertaken to understand the likelihood of future climate hazards and the potential impacts of these hazards on cities and their inhabitants. The assessment is important to identify and prioritise relevant actions that will respond to the risks.

The City's vision for undertaking the risk assessment was to identify and illustrate the risks in a visual way that was easily communicated to key decision-

makers and stakeholders. With support from C40, the team acquired consultants to:

- Update climate projections
- Conduct a sector-based risk and hazard assessment
- Conduct a sector-based impact assessment
- Develop an easy-to-use climate story map

The eThekweni team recognised that climate risk assessments and adaptation require a combination of both top-down and bottom-up approaches. A typical top-down approach uses global development scenarios where different societal and technological developments are described with associated greenhouse gas emissions and climate models to identify climate impacts at various scales

and define adaptation needs. This provides insight into a range of future changes but often produces results less relevant for municipal contexts. Bottom-up approaches focus on understanding the root causes of local vulnerability to climate change and

use participatory processes to address these in adaptation strategies. Bottom-up approaches allow for the mainstreaming of outcomes into municipal decision-making and activities.

Update climate projections

Background

The Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (AR5) has developed four Representative Concentration Pathways (RCPs) to show a range of possible greenhouse gas emissions concentration pathways and are used as a basis for climate modelling. The four RCPs include one mitigation scenario (RCP 2.6), two medium stabilisation scenarios (RCP 4.5 and RCP 6.0) and one very high baseline emission scenario (RCP 8.5).

Projections used

For this project, climate change projections for RCP 2.6, RCP 4.5 and RCP 8.5 were used to span the full range of possible futures. Since each RCP has around 100 General Climate Models (GCMs) producing different climate change projections, one projection close to the ensemble mean was selected for each RCP. The 1.5°C scenario only occurs in RCP 2.6, therefore, a climate projection close to 1.5°C was selected for that particular RCP.

Compare historical trends

Because GCM data has a much coarser resolution compared to historical climate data (in this case 1x1km), information from the higher resolution historical climate data was used to downscale data from the GCMs. The GCM data for the historical period (1996-2015) and the future period (2041-2060) was compared and analysed for changes in a large set of climate indicators. Figure 18 shows the process followed to update Durban's climate projections.

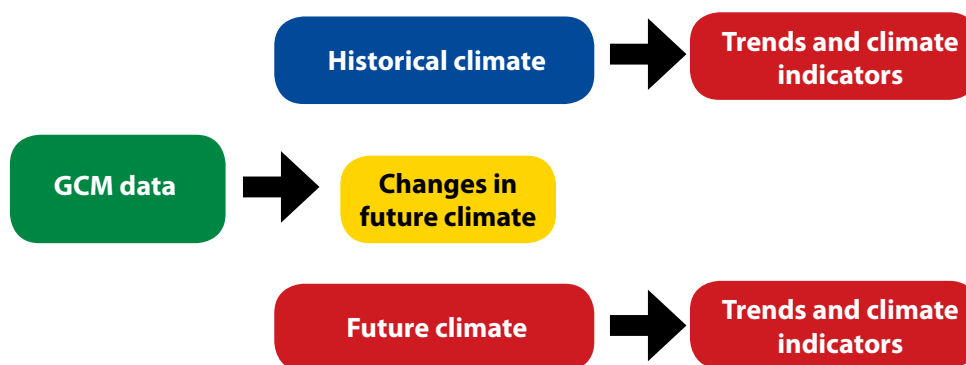


Figure 18: Process followed to update climate projections

Identification of climate hazards and risks

Background

To reduce the vulnerability to climate change, the risks and vulnerabilities of the different sectors need to be known, as well as its drivers. An important step, therefore, is to conceptualise and understand the relationships between the climate hazards and risks. Different concepts and terms of risk and/or vulnerability are used in literature. According to the IPCC AR5, risk is the central concept, which is influenced by hazards, exposure and vulnerability. Table 4 illustrates the IPCC AR5 definitions for climate hazards and risks and focus areas used for the Durban CAP.

Table 4: Climate hazards and risks

Term	Definition Used	Durban's Focus Areas
Climate hazards	Extreme and/or abrupt changes to the climate system such as precipitation extremes, storm surges, droughts and floods	Heat, drought, pluvial flood and coastal flood (sea-level rise)
Climate risks	Potential damage to social capital, economic capital and natural capital, from climate impacts	Social capital – health, disaster and hazards affecting society Economic capital – energy, infrastructure, transport, Information and Communications Technology (ICT), food and agriculture, recreation, tourism and commercial/ industrial zones Natural capital – environment and biodiversity, and water resources

Impact assessment

In order to assess the climate risks for Durban, climate impact diagrams were developed to structure the known impacts and prioritise them based on expert knowledge. A climate impact diagram can illustrate how climate hazards could potentially affect Durban's social, economic and natural capital.

A very broad range of impacts will occur at various levels of scale. Some effects will be far-reaching while others will be less marked but perhaps more frequent. There may also be cumulative and knock-on impacts, both within and across sectors. A sector-based risk assessment workshop was held to gather local expert knowledge on climate hazards and risks from a sector perspective. Figure 19 illustrates the impact diagrams and the additional stakeholder feedback and prioritisation of risks and impacts.

Priority impacts were then classified using the following timeframe classification and magnitude of impact:

Timeframe	Magnitude of Impact
1. Likely to happen this century	1. Nuisance
2. Likely to happen within decades	2. Damage
3. Likely to happen within years	3. Disruption

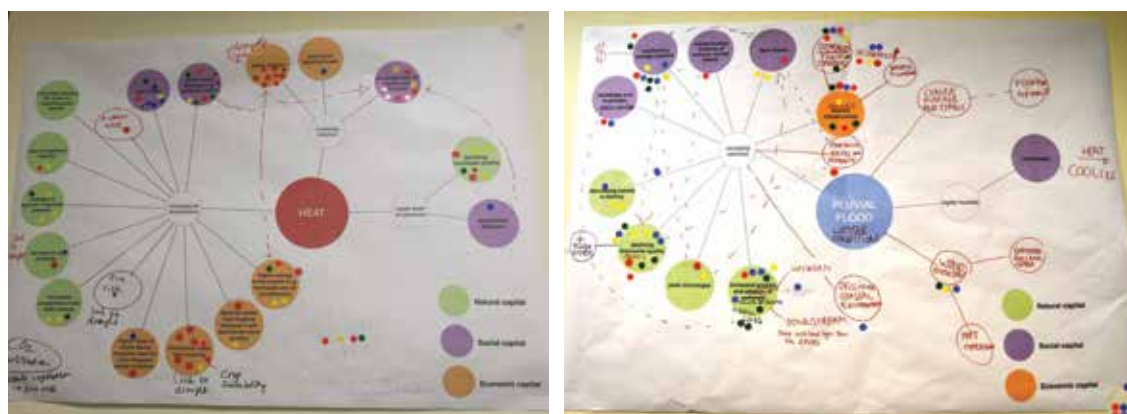


Figure 19: Outputs from Climate Risk Assessment workshop

Climate story map

The service provider and the eThekweni working group placed emphasis on visualising climate information in a way that translated complex climate science into a visual output that appeals to the City government and other stakeholders. Consultants and municipal officials worked together to co-produce a series of maps in the form of a story map that linked climate science with City priorities and concerns. Not only are maps easier for a variety of decision-makers to engage with than a dense technical report, they can more easily be integrated with other types of information as well as be updated as new information becomes available (if the necessary resources, capacities, capabilities and incentives are in place to do so). Figure 20 provides examples of the Durban CAP Story Map that informed the CAP process.

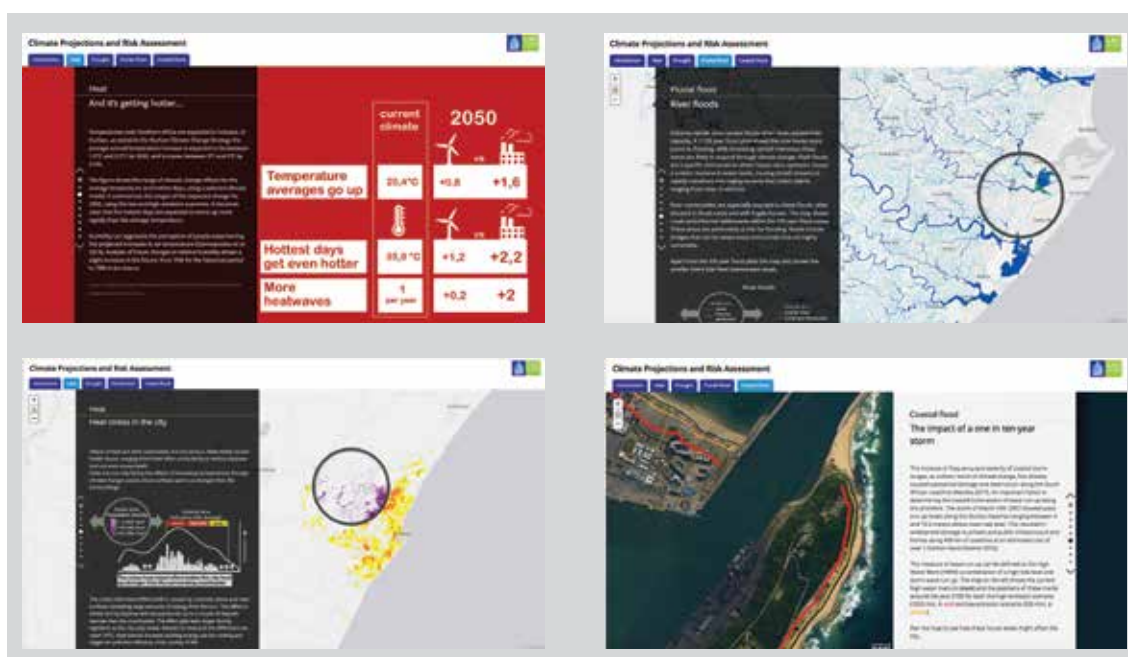


Figure 20: Images from the Durban CAP Story Map.

Source: <https://ethekwini.maps.arcgis.com/apps/MapSeries/index.html?appid=4c59620219d343a1aec468b87aa0ffc5>

CHALLENGES

- ☒ It was difficult to retrieve relevant data in order to inform the process. City officials were cautious when providing data to service providers and the core team due to uncertainty on how the data was to be used.
- ☒ The Information Technology (IT) Unit was required to provide support for the online climate story map, which proved to be difficult as they were roped in at a late stage in the process.
- ☒ Communicating climate change hazards and risks in scientific terms was not relatable to relevant impacted sectors that focused on social and economic issues, which posed a problem to secure buy-in.





LESSONS LEARNED

- ✓ Framing climate information and action as a way of achieving social and economic development goals enables cross-sectoral buy-in and understanding of the process.
- ✓ Establish a communication protocol that ensures efficient flow of information and houses information in a central data storage system to enhance data management.
- ✓ International skills are beneficial in terms of providing a different perspective on data management and analysis.
- ✓ For an online tool, communicate with the City's IT Unit at the earlier stages to ensure ownership and alignment of the risk assessment.

TIP



Developing processes that build capacity, relationships and knowledge is critical to guarantee future engagements that facilitate climate change collaboration.

Emissions scenario modelling



EThekwini's approach

To inform the mitigation actions for the CAP, it is essential to develop an emissions scenario that outlines a pathway to achieve carbon neutrality in the City. The GHG emissions inventory and scenario modelling component aims to assist cities with developing the evidence base for decision-making to establish emission reduction targets and identify and prioritise actions to reduce emissions. To develop emission scenarios, it is important for the City to have an up-to-date GHG inventory to establish a Business as Usual (BAU) Scenario and a 2050 ambitious emissions trajectory.

A GHG inventory provides the underlying data when developing a BAU scenario and an ambitious 1.5°C pathway.

EThekwini opted to use existing tools in the form of the C40 Pathways tool to support the development of the City's emissions trajectory. The C40 1.5°C Pathway Tool provides a platform for city-scale emission reduction planning.

The scenario modelling approach is stakeholder-driven and dependent on inputs and perspective from relevant sectors and plans, including national government. The process that the eThekwini team underwent was an iterative process, with a number of engagements and meetings for various internal stakeholders to agree on the ambition set out (Figure 21).

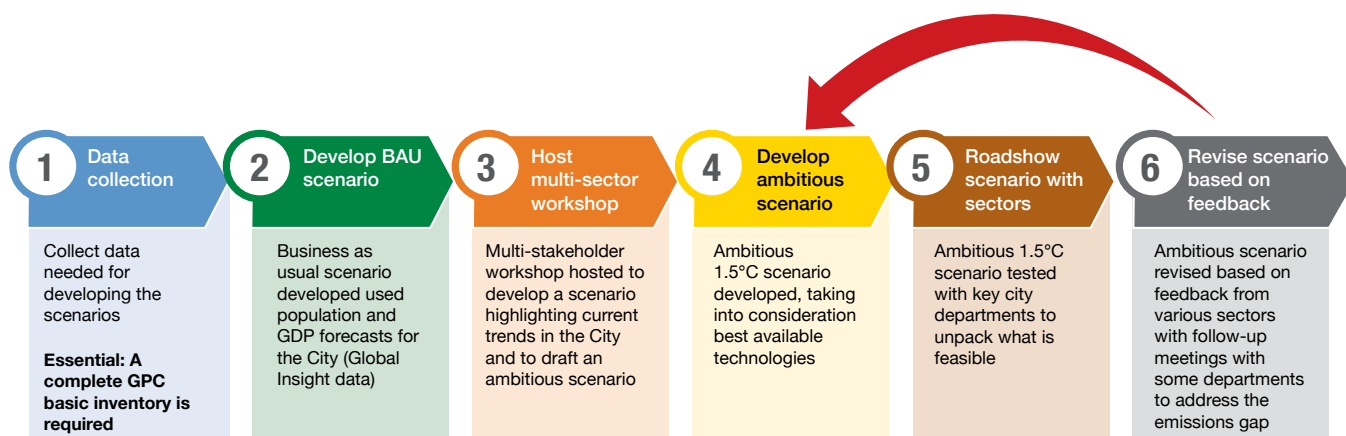


Figure 21: Approach followed to develop Durban's ambitious emissions scenario

GHG inventory

A GHG inventory is an account of GHGs emitted to and removed from the atmosphere, either directly or indirectly. It is vital to have a current/up-to-date GHG emissions baseline inventory for prioritising action, setting goals and targets and measuring progress.

EThekweni Municipality has a dedicated city official to complete the City's GHG emissions inventory in-house annually and calculate emissions for both local government operations and the community annually. EThekweni uses both the International Local Government GHG Emissions Analysis Protocol and the Global Protocol for Community-scale GHG Emission Inventories (GPC) to develop the City's GHG inventory. The reason for adopting two approaches is due to a strong emphasis on developing and tracking emissions directly linked to the Municipality. Figure 22 provides a snapshot of Durban's GHG inventory in comparison with other cities.

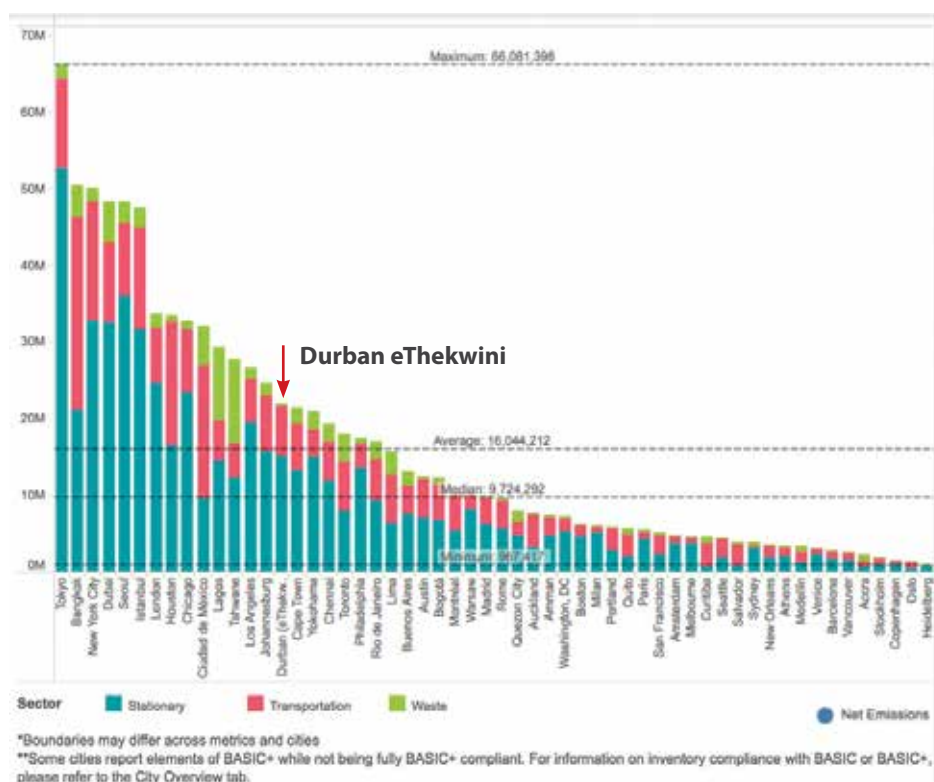


Figure 22: City comparison of GHG inventories

Source: <https://www.c40.org/other/gpc-dashboard>

Develop a BAU trajectory

A BAU scenario outlines a pathway for the City if no further climate action is taken, given anticipated population, economic and sectoral energy intensity changes.

Using the Pathways data collection sheet, Durban began the process of collecting relevant data for the scenario modelling. The data collection was informed by the set base year, 2015. The City chose a base year that was linked to its most recent published *GPC compliant* GHG inventory. Using the population and economic growth projections, combined with the City's 2015 GHG emissions inventory, a BAU scenario was developed.

The BAU scenario was tested during a stakeholder engagement workshop aimed at finalising the BAU scenario and developing an ambitious emissions scenario for 2050.

Develop a 2050 ambitious emissions trajectory

An emissions trajectory or carbon budget should outline a scenario to achieve carbon neutrality by 2050 and set interim targets towards a zero carbon goal. The trajectory should form the basis for identifying and prioritising actions in the plan.

A draft ambitious emissions trajectory was developed during a stakeholder workshop, however, due to time constraints to convey the requirements of this scenario, the scenario developed was insufficient to meet what was required for a 1.5°C pathway. The City worked with the C40 team to develop an aggressive reduction scenario that was plausible.

The climate change team undertook a roadshow with key sectors to get feedback on the revised scenario. Meetings were held with the following departments:

- EThekweni Electricity
- EThekweni Transport Authority and City Fleet
- Durban Water and Sanitation
- Durban Cleansing and Solid Waste
- Spatial Planning Branch
- Economic Development

The discussions were challenging as the scenarios required a level of commitment that some departments felt were out of their control. Therefore, in some instances, the implementation levels were adjusted downwards to reflect ambitious, yet achievable targets. The ambitious scenario was revised to reflect the views and feedback received from various departments and sectors in the City.

The final ambitious scenario resulted in an 80% reduction in emissions from a 2015 baseline by 2050 (Figure 23). The scenario showed that the biggest emission reductions will be achieved from the electricity and transport sectors, achieving 50% and 25% of total reductions respectively. Therefore, in terms of action development and prioritisation for mitigation actions, the climate change team focused much of the attention in these areas.

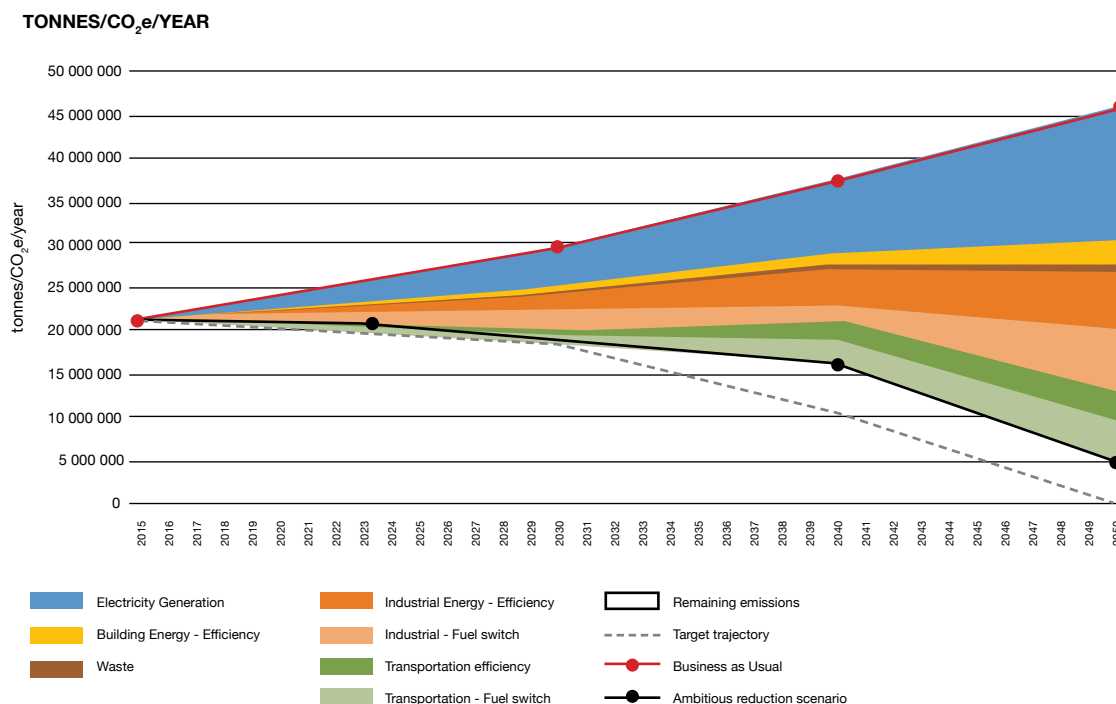


Figure 23: Final ambitious climate action scenario 2015-2050

Residual emissions

While the aim is for Durban to be carbon neutral by 2050, the emissions modelling only allowed the City to achieve an 80% reduction in emissions from 2015 levels. The City, however, has committed to continuously explore avenues to reduce this further, including new technologies and carbon offsetting opportunities.

CHALLENGES

- ☒ While the Pathways tool is flexible, it did require some data inputs, which posed a challenge, as data is stored in different repositories within the City and in some instances was not available. This raises uncertainty around data integrity.
- ☒ Using up-to-date input data from a reliable, credible source that is acceptable to all departments involved.
- ☒ Determination of various scenarios and achieving consensus among stakeholder groups in relation to the ambition required was a challenge.
- ☒ There was limited time to engage with City officials and clearly explain the process and assumptions that led to officials making decisions without adequate information on the technical intricacies around climate change.
- ☒ There were a number of requests from departments for specific actions and measures to respond to climate change for their sector, while the Pathways tool only provided high-level strategic insight.



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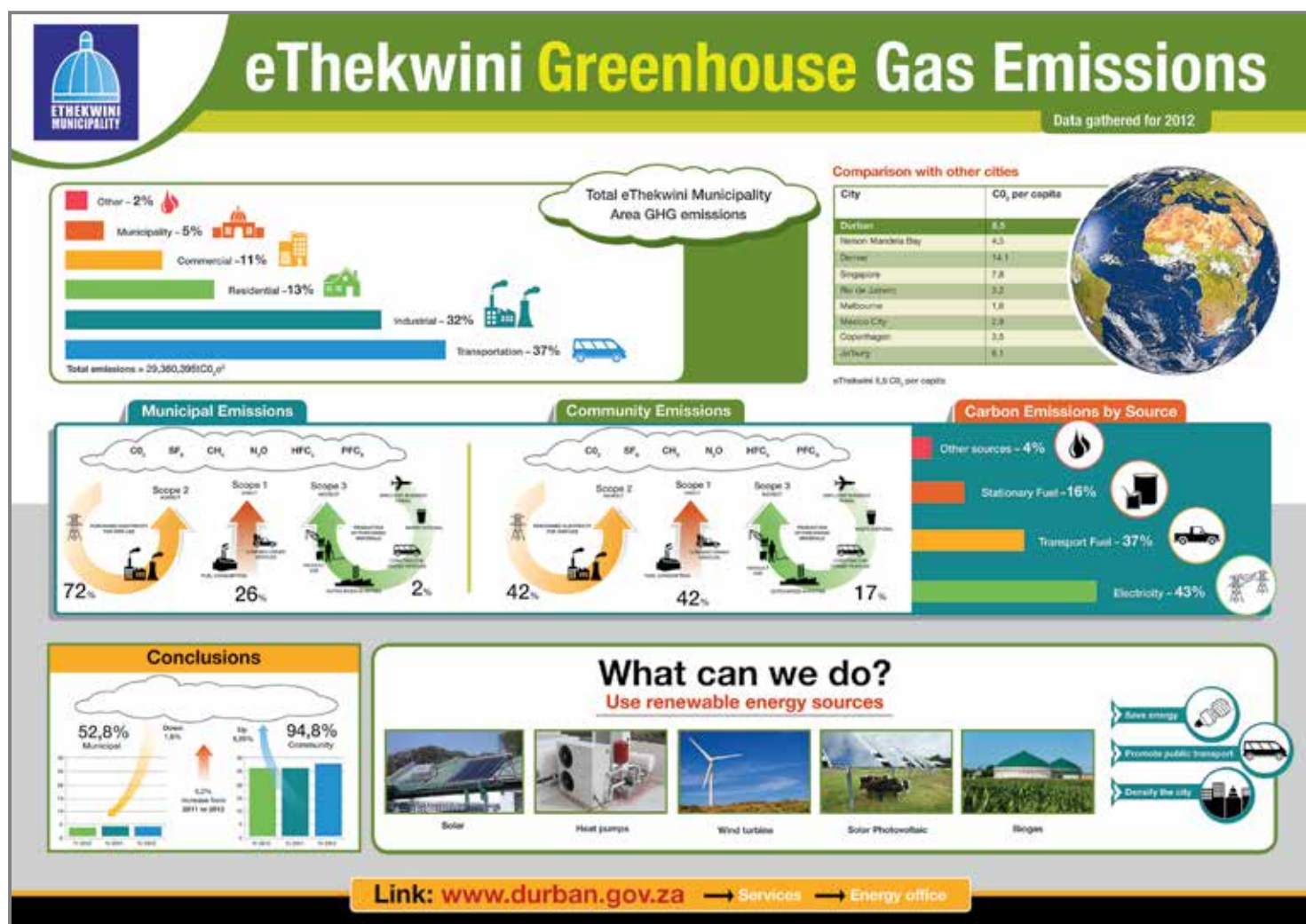
Getting to zero
is difficult...
always
balance being
ambitious
with what is
achievable
to ensure
buy-in from
stakeholders.
Identify
long-term
opportunities
to address the
emissions gap.



LESSONS LEARNED

- ☑ The city, where possible, should establish in-city energy tools to guide action planning.
- ☑ Recognise that in-city energy modelling capabilities are important for ensuring consistent updating of the scenarios.
- ☑ Ensure that City officials are well-informed of the process and are capacitated to use the selected emissions forecasting tool.
- ☑ Be prepared to compromise on what is achievable, but always ensure that this does not distract from the overall objectives.
- ☑ Tap into available resources in the sector to support the development of scenarios.
- ☑ Consultation with the private sector in the early stages of developing the emission scenarios could have resulted in more informed outcomes for industrial emissions.

”



7.

Actions speak louder than words



Context

The action development phase of developing the CAP is arguably the most important component of the CAP process. The plan should use the evidence base of the GHG emissions scenario modelling and climate risk assessment to identify and prioritise mitigation and adaptation actions. Importantly, this should be coupled with a strong stakeholder engagement process to get buy-in of the actions and an understanding of what is practically implementable within a city's context.

In addition to identifying actions, the process also sought to identify various underlying factors associated with action implementation:

- **Action status** – The status of the actions were noted in the following categories: New, planned, in progress and ongoing
- **Risk and barriers** – Challenges and barriers to implementation of the action as well as opportunities to mitigate the risk were highlighted
- **Costs and benefits** – For existing actions, where possible, capital and operating budgets

were allocated to the actions and relevant social, economic and environmental benefits were identified

- **Lead implementers and supporting** – Lead city departments were identified, as well as supporting institutions
- **Timeline** – Action delivery timescales were categorised into short, medium and long terms



EThekweni's approach

The development of the actions and prioritisation of the actions followed a participatory and co-exploratory approach. It was an iterative process that was built on learnings from initial engagements to identify the most practical and feasible approach, while also ensuring sectoral buy-in. The final process involved the co-development of actions, linked to sector departments' existing work and building upon this work to ensure that the actions are aligned with the commitment outlined in the Paris Agreement. Figure 24 illustrates the process followed to identify and prioritise actions in the City.



Timeline
4 months
(November 2018 - February 2019)



Stakeholder engagement
2 workshops
One-on-one meetings – 20 departments
Final presentation to the Technical Task Team (Heads of Units)



Human resources
Internal – 2 staff
(3 days a week)

External – consultants



Further reading
Durban CAP sector workshops and action prioritisation report
Durban CAP action and sub-action list.xls
Focused acceleration
www.mile.org.za

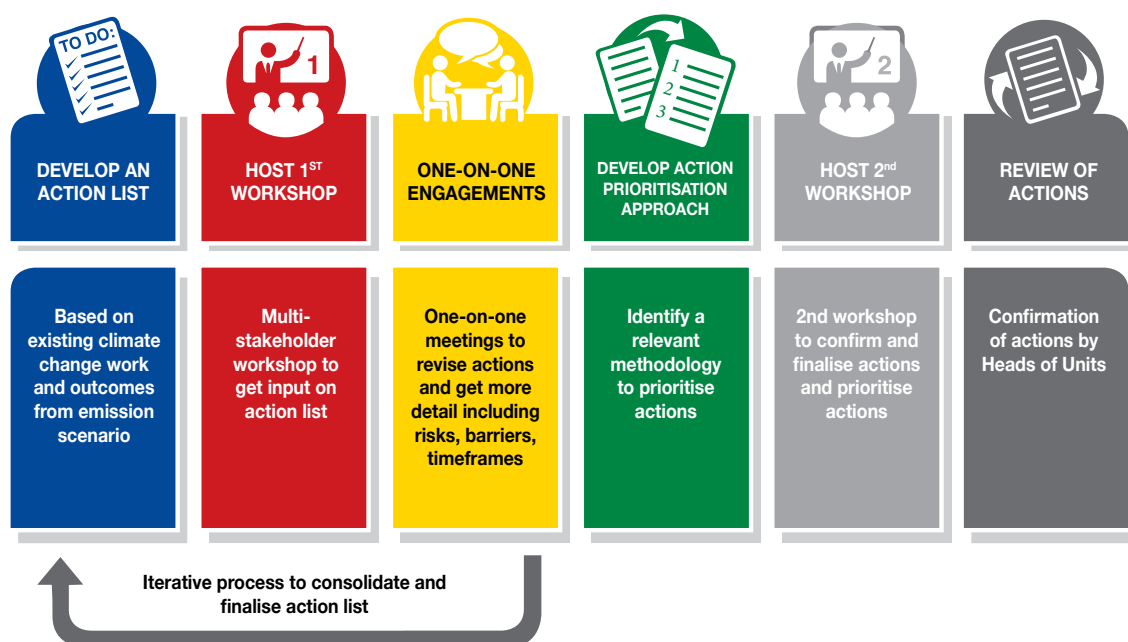


Figure 24: Process followed to identify and prioritise actions

Develop an action list

At the outset of identifying actions, it was evident that there was the need for consensus across municipal departments on an approved, consolidated list of climate actions.



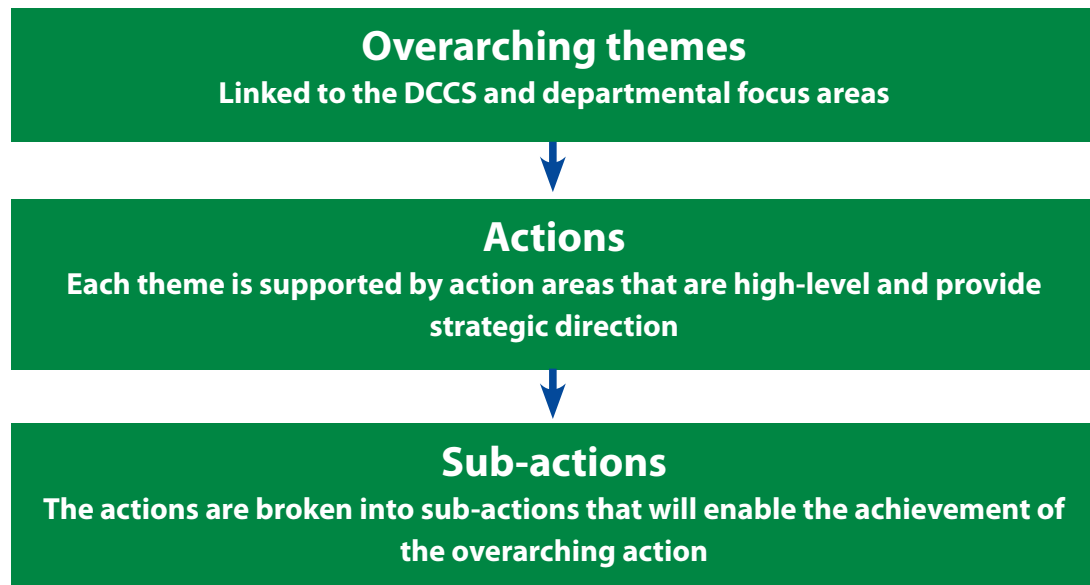
The eThekweni team aimed to build on existing climate change strategies and plans and use the CAP process to address gaps in existing work. There were various lists of climate change responses, notably, a list of high-level objectives outlined in the DCCS and a list of spatially relevant climate actions in the eThekweni Climate Resilience Implementation Plan for Spatial Planning. There were also various sector level lists of climate-related actions embedded within municipal strategic documentation. However, there was no consolidated list of actions that brought together mitigation and adaptation options across different sectors. In addition, the level of ambition of the CAP, particularly with regard to mitigation, considerably outstripped the level of ambition of actions articulated in the DCCS and other documents, as indicated in the scenario development phase.

A draft action list was compiled using existing documentation (Figure 25), the outcomes from the 1.5°C pathways tool and the climate risk assessment.



Figure 25: Documents consulted to develop the action list

The action list was structured as follows:



The draft action list was then shared with various departments and a workshop was held to get stakeholder views on the draft action list.

Host first workshop – introduce draft action list

The purpose of the workshop was to undertake a preliminary review of the proposed actions with a view to determine if there were any actions that departments would not support and to identify any new actions that may not have been identified previously. In addition, the preliminary prioritisation criteria would be reviewed by departments and a final list of prioritisation criteria be agreed upon.



However, it became evident at this workshop that individual engagements would be necessary with sector departments in order to:

- Ensure that actions were in-line with the strategic planning process of sector departments
- Secure additional detail on the actions such as timeframes, relevant departments, costing and risks and barriers
- Ensure that sector departments are in support of the relevant actions in the CAP

From few to many:

As a result, the consultation process evolved from:

A few engagements at a cross-sectoral level where actions would be finalised and prioritised
to
Many sector level engagements where the action list would be developed and interrogated in some detail.



One-on-one engagements

A draft action list highlighting actions specific to a department was circulated prior to the engagement. During the engagements, the actions and associated sub-actions were reviewed and updated with the presence of technical officials who are most familiar with each action area. In addition to the actions, the officials also reviewed:



- Overarching goals and targets for each sector that emerged from the scenario modelling
- Barriers and risks
- Timeframes
- Costs and whether there is budget available
- Lead implementers and support

“
This consultation approach was considered important as it would foster long-term support for the CAP from line departments by including them in the CAP development process.
”

In some instances, line departments were engaged with more than once as additional key stakeholders were often identified during the discussion with the line departments. This approach resulted in an iteratively revised action list that was constantly updated with comments from stakeholders. In total, the team and consultants had 20 consultations with sector departments.

The one-on-one engagements helped the team to understand the limitations to actions and enabled the climate change team and line functions to collectively identify solutions and compromise on targets and actions set out.

For example, the Pathways tool outlined a complete transition from minibus taxis to electric buses, which in a Durban context is highly political, therefore, not feasible, so this was revised accordingly.

Develop action prioritisation approach

It was initially envisaged that a key component of the stakeholder engagement would be to develop a method for prioritisation of mitigation and adaptation actions and then prioritise specific actions. At the initial multi-stakeholder workshop, the process and proposed method for prioritisation was introduced. This proposed method included a system for considering desired outcomes from the NDP, Municipal Scorecard, eThekweni's 8 Point Plan and the SDGs. Interlinking themes across these plans could be used to identify prioritisation criteria (Figure 26).



However, it was noted that the CAP action list would need to be more fully developed before a list of prioritisation criteria could be agreed upon. Participants at the initial multi-stakeholder workshop highlighted that the list of criteria used for prioritisation should not detract from the intention of the CAP, which was to respond to climate change challenges. A long list of criteria for prioritisation ran the risk of actions being sidelined or deprioritised based on other developmental objectives of the country and municipality. The consensus was to use fewer rather than more criteria for prioritisation.

The Climate Change Team then agreed on a shortlist of criteria to use for prioritisation of the high-level actions. The three criteria eventually agreed upon for high level actions were whether they significantly reduced greenhouse gases or significantly improved resilience and had a high return on investment (financially, socially and environmentally) (Figure 27).

FROM... Initial prioritisation criteria

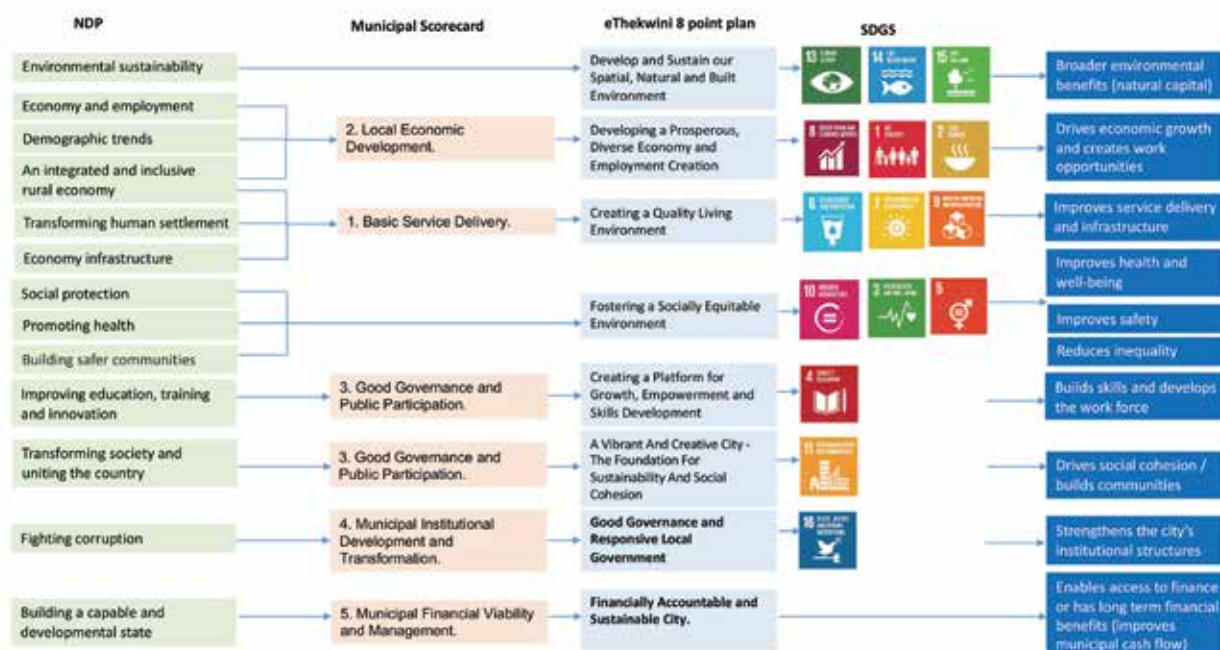


Figure 26: Alignment of C40's Climate Action Planning Framework to the NDP, Municipal Scorecard, eThekweni 8 Point Plan and SDGs.

TO... Prioritisation criteria used

Actions should be prioritised if they

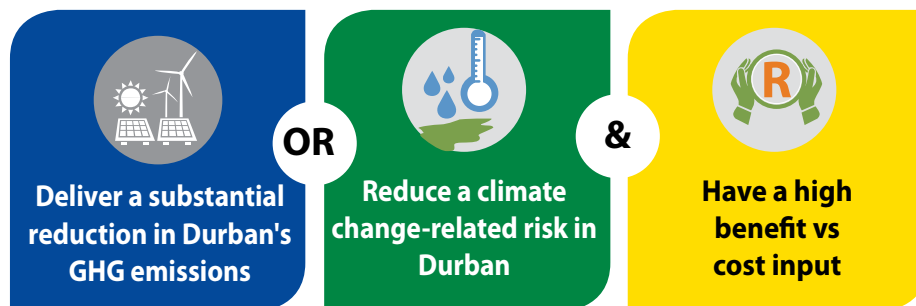


Figure 27: Prioritisation refinement used for the Durban CAP

Second workshop – to review and confirm actions

A multi-departmental meeting was held to facilitate discussions around finalising actions for the CAP, after a series of one-on-one engagements with departments.



The objectives of the workshop were to:

- Review and confirm the actions, including a high-level appraisal of timelines, roles and responsibilities, benefits and trade-offs and costs
- Allow departments to provide cross-departmental feedback on the actions
- Prioritise actions based on a set of prioritisation criteria that would drive significant emission reductions and/or build resilience but would also have other benefits aligned to the City's priorities

Interactive facilitation methods were used such as the 'marketplace method' (where content is printed out on large sheets and stakeholders are provided with an opportunity to comment directly on the sheet), and the 'world-cafe' method (where stakeholders rotate through small groups focused on key items).

Key comments that were made on the sheets were discussed in plenary and these were incorporated into the draft list of actions.



Transformative sub-actions identification

A voting exercise was used to identify the most transformative and catalytic sub-actions. This exercise was carried out by individuals who reviewed the actions across all sectors at a level of detail (i.e. potential GHG reduction, potential resilience benefits, etc.) and then prioritised actions. To prioritise actions, participants were asked to identify actions based on the following questions:

- Will it achieve a great reduction in GHG emissions and/or result in high resilience?
- Should it be focused in the short term?
- Will it be significantly beneficial given the inputs required?

As a result, the five most transformative sub-actions identified were:

1. Transport – ‘Establish low emission zones by limiting the entrance of vehicles using fossil fuels and promoting non-motorised transport (NMT)’
2. Electricity – ‘Develop a funding model for eThekweni Municipality that takes into account reduced income from electricity sales as a result of the shift to self-generation by customers’
3. Transport – ‘Promote transit-oriented development to achieve spatial transformation, economic and social opportunities, and public transport efficiencies (in line with the Built Environment Performance Plan targets)’
4. Health – ‘Develop a strategy for heat mitigation that includes guidelines for the incorporation of heat mitigation measures in developments and urban design’
5. Electricity – ‘Develop an Independent Power Producer support programme to facilitate the diversification of the supply of energy’

Review of actions

The outcomes from the second workshop were presented to Heads of Units at the Climate Change TTT meeting. The Heads of Units were given the opportunity to comment on the targets and actions that emerged from the CAP process. Key feedback that emerged from the TTT session is as follows:



- The plan needs to provide the best return on investment from a social, environmental and economic perspective.
- The city-wide energy efficiency programme must be included in the prioritised list of actions, as it has a potential to achieve quick wins in emission reductions and cost savings.
- Incremental targets should be developed to provide short-term goals to guide the process.



CHALLENGES



- ☒ Limited time to ensure extensive stakeholder engagement – A 1.5°C CAP proposes fundamental changes to the way a city operates. The process assumes that there are already existing strategies and actions to build on.
- ☒ Data availability and missing information can impact the actions that are prioritised for implementation.
- ☒ Estimating costs and benefits of actions with limited context and information is challenging.
- ☒ There was no mechanism in the City to deal with trade-offs between actions.
- ☒ Ensuring consistency in the level of detail of actions was a challenge. There was a need to balance not being too prescriptive but providing enough detail to enable implementation. Different levels of engagement and consistency from different groups resulted in varied specificity across actions.

LESSONS LEARNED



- ☑ Be flexible in your approach. The team set out with a specific approach to developing and prioritising actions, however, as the work unfolded, we needed to adapt to the situation and use approaches that would best suit various stakeholders.
- ☑ It takes time to influence people on the climate change journey. There is a requirement of a lot more consultation and more time to ensure stakeholders understanding and buy-in of the process. Ensure that the process is iterative and ongoing even after the CAP is finalised.
- ☑ Be aware of the political environment and ensure that actions are not impacting sensitive areas.
- ☑ Be careful of setting targets that are too ambitious as they could be viewed as unrealistic and, therefore, irrelevant.
- ☑ Where possible, link actions to line departments' strategic plans to ensure more buy-in and acceptance of the action plan.

TIP



Developing and prioritising actions is a combination of the outcomes from the science and people who will support the implementation of the actions once the CAP is complete.

8.

Putting it all together



Timeline
First draft (2 months)
March 2019 – April 2019
↓
Review, edits, and Council approval (4 months)
May 2019 – August 2019

Stakeholder engagement
Internal review
2 x climate change staff
Council presentation

External review
3 external organisations

Human resources
Internal – 4 staff
(3 days a week)

Further reading
Final Durban Climate Action Plan
Draft structure of the action chapter
www.mile.org.za



EThekweni's approach

On completion of the previous stages of the CAP process, the final stage is drafting the Plan. The climate change team wrote up the CAP in-house with no support

from consultants. This enabled the team to own the process and the report. The team applied the process outlined in Figure 28 to write up the CAP. Two key areas supported the write-up: 1. Reviewing other published CAPs and 2. Incorporate content from the CAP process.



Figure 28: The process followed to write up the CAP

Review other published CAPs

To inform the writing of the CAP, the team conducted a brief overview of the structures of the existing CAPs that are available on the C40 resource centers website (resourcecentre.c40.org). The overview focused on:

- The general contents of the CAPs, what information is incorporated in the CAPs
- How the actions have been presented
- General layout and design of the CAPs

Seven CAP reports were available at the time for the following cities:

- Barcelona (Spain)
- Copenhagen (Denmark)
- London (United Kingdom)
- New York City (United States of America)
- Oslo (Norway)
- Paris (France)
- Stockholm (Sweden)





Figure 29: CAP Reports from other cities

General recommendations emerged from other CAPs

- **Keep it short and simple:** It was recommended that the eThekweni CAP be concise and written in plain English so that it is user friendly. The Oslo CAP does this particularly well, filling a total of just 28 pages.
- **Keep it as visual and graphic as possible:** The CAPs presented included many pictures, graphics and diagrams so that they are visual and easily understood. The Barcelona CAP used many graphics and icons to display information, making it a document that is easier to read.
- **Divide the actions into broader themes related to the City's existing work:** Most of the reviewed CAPs divide their climate actions into broader themes, which help to group the different type of actions. New York City, for example, uses the term 'Key Actions', while Barcelona uses 'Lines of Action'. It was recommended that eThekweni Municipality use the themes identified in the DCCS to organise the actions in the Actions Chapter. These 10 themes include: Water, Sea-Level Rise, Biodiversity, Energy, Waste and Pollution, Transport, Health, Food Security, Economic Development, and, Knowledge Generation and Understanding.
- **Actions up to the 2050 period:** The CAP Framework identifies 2020 as the period for the actions and so some of the CAPs like New York City only identify actions up to 2020. Others like the Stockholm example identify measures for two periods, 2020 and 2040. Durban focused on 2050 as the target and the need to develop short-, medium- and long-term targets.

Incorporate content from the CAP process and draft the chapter outline

The C40 CAP Framework and the CAP process were used to inform the chapters of the CAP. Importantly, the CAP needed to provide an evidence base for action and the Climate Risk Assessment and Emissions Scenario Modelling were key components of this. A draft outline was put together and revised based on feedback from the team. Table 5 illustrates the chapter outline for the CAP and its links to the CAP Framework process and pillars.



Table 5: Linking the Durban CAP to the C40 CAP Framework

C40 CAP Process	Framework Pillars	Framework Sub-pillars	Durban CAP Contents
			Preamble
Strategic climate action planning appraisal	Pillar 2: Challenges and opportunities	2.1 City context	Durban as a City Why a 1.5°C CAP? A snapshot of Durban's climate change journey
		2.2 City management and powers	Climate change governance in Durban
GHG emissions and Climate Risk Assessment	Pillar 2: Challenges and opportunities Pillar 3: Acceleration and implementation	2.3 Greenhouse gas emissions inventory	Towards a carbon-neutral and a resilient Durban
		2.4 Greenhouse gas emissions trajectories	
		2.5 Climate risk	
		3.3 Residual emissions assessment	
	Pillar 1: Commitment and collaboration	1.1 Vision, commitment and engagement 1.3 Targets and goals for mitigation and adaptation	Vision and targets
Action plan development	Pillar 3: Acceleration and implementation	3.1 Mitigation and adaptation actions	Actions
		3.2 Overcoming challenges	Securing carbon-neutral energy for all
		3.4 Inclusive climate action	Moving towards clean, efficient and affordable transport
			Striving towards zero waste
			Providing sustainable water services and protection from flooding
			Prioritising the health of communities in the face of a changing climate
			Protecting Durban's biodiversity to build climate resilience
			Provide a robust and resilient food system for Durban

C40 CAP Process	Framework Pillars	Framework Sub-pillars	Durban CAP Contents
Action plan development			Protecting our City from sea-level rise Building resilience in the City's vulnerable communities Action timeframe and summary table
Moving towards implementation	Pillar 1: Commitment and collaboration	1.2 Coordination with related initiatives and institutions 1.5 Communications, outreach and advocacy	Sisonke: Together we can
	Pillar 1: Commitment and collaboration	1.4 Human and financial resources	Financing the transition
	Pillar 3: Acceleration and implementation	3.5 Monitoring, evaluation, reporting and revision	Monitoring the CAP

Workshop to write up the CAP

The team structured a writing week away from the offices to focus on writing up the CAP, which allowed the team to fully dedicate time to the CAP. The week was structured so that all team members contributed to the general outline for each chapter and thereafter roles, responsibilities and timelines were allocated for the write-up of each chapter.



The write-up week didn't result in the CAP being fully written up, but really helped to accelerate the write-up process. Once the write-up week was complete, the team met weekly to assess progress and support each other with the write-up.

Chapters were then edited and consolidated by one team member to maintain consistency of writing styles in the CAP.

Review

The review of the CAP can be a lengthy process. Ideally, the team needed to allow reviewers at least two weeks to review the report. Due to time constraints, the team ran some of the review processes in parallel and consolidated feedback thereafter.



Core team review: Throughout the write-up of the CAP, the team consistently used the Framework to review the CAP and ensure that the CAP and supporting documentation met the requirements set out in the Framework. The extensive action list developed in the Action Development phase played an important role in highlighting critical components that needed to be considered when developing an action.

Additional eThekweni staff review: On completion, the draft was internally reviewed to ensure that it aligned with existing strategies and plans and that there were no major gaps.

External review: Lastly, the CAP was reviewed by C40 technical experts to ensure that it met the essential requirements set out in the C40 CAP Framework. Despite the team using the Framework as a guide, there were many gaps in supporting documentation or in the general CAP write-up that required the team to build on and provide clarity.

Council approval

To formalise and publish the CAP, it is important for it to be approved by relevant structures in the City. Become familiar with the requirements for approval and the documentation required to be circulated in advance of any formal meetings.



The Climate Change team used their existing formal structures of the political Climate Change Committee (CCC), chaired by the Mayor and consisting of political councillors, to constantly appraise and brief political leadership of the CAP, so that councillors were aware of the report. Furthermore, the team identified political leaders as champions to assist the process.

The team also requested to present the process to the councillors, which allowed simplification of the CAP and key findings that enabled councillors to easily grasp the objectives and outcomes.

CHALLENGES



- ☒ The write-up of the CAP requires time and commitment from individuals. Other conflicting commitments and limited resources can delay the process.
- ☒ Accommodate different perspectives on what should be prioritised and included in the CAP.
- ☒ Authors have different writing styles that need to be carefully reviewed and edited to ensure consistency in the approach.
- ☒ The length of the CAP needs to be considered when writing up. Too long a document will be challenging to read and too short a document can exclude important information. Balancing these approaches is a challenge.

LESSONS LEARNED



- ☑ Start drafting the introductory and contextual chapters ahead of time, to ensure efficient delivery of the CAP.
- ☑ Taking authors out of the usual office space to focus and dedicate time to writing up the CAP facilitates the process.
- ☑ Include an independent stakeholder as a sounding board to balance different perspectives.
- ☑ Allocate time to review and edit the chapters to ensure consistency in writing styles and approaches.
- ☑ Decide as a team on a favoured approach for the report. Identify components that can be added as external or supplementary resources to keep the CAP concise.
- ☑ Be aware of political processes for approving the CAP and allocate sufficient time to ensure that the process goes smoothly.

9.

Getting there collectively



Context

The development of a CAP requires well-planned and inclusive stakeholder engagement that is interactive in order to help translate stakeholder feedback and to align them with the CAP process. Multi-stakeholder engagement and consultation is essential for developing strategy and securing widespread support and buy-in for the plan; gathering the appropriate and comprehensive data and information to guide the process; facilitating the establishment of critical partnerships and securing relevant investment of resources.

The success of an integrated plan such as the Durban CAP and its implementation is highly dependent on the engagement process in order to yield the requirements for its realisation. Some of these benefits include:

- Ownership of the developed plan and contained vision, mission and objectives
- Strategic buy-in and integration into operational and sector plans

- Enhanced mainstreaming of actions due to better alignment with stakeholder needs
- Securing of commitment for implementation



EThekwin's approach

Durban's CAP builds on the existing DCCS, which underwent an extensive stakeholder engagement and participatory process during its development in 2013 and 2014. The stakeholder engagement process focused on two main areas:

- Internal stakeholder engagement – with the City's municipal line functions and departments that impacted or are impacted upon by climate change
- External stakeholder engagement – identifying and prioritising external stakeholders that would be impacted by the Plan or have the power to play a role in influencing or implementing aspects of the Plan

The process

Figure 30 outlines the process that the City underwent to engage and solicit feedback from stakeholders to inform the CAP.



Figure 30: Stakeholder engagement process for the CAP

DCCS stakeholder engagement

The DCCS was adopted by the City's Council in 2015. To develop the Strategy, the City ran a city-wide stakeholder engagement process.



The stakeholder engagement used various platforms that are illustrated in Figure 31, including:

- **Initial phase to identify climate change issues:** Stakeholders were invited to provide input on which climate change issues should be addressed by the DCCS. This was done using a number of communication mediums, including, radio, printed media, the internet via an established webpage for the project where all documentation and questioners were made available publicly, an SMS line and telephonic communication to stakeholders on surveys, as well as a face-to-face meetings. These themes included: Water; Biodiversity; Food Security; Health; Waste and Pollution; Energy; and Transport. The two cross-cutting themes – Economic Development and Knowledge Generation and Understanding – emerged as key topics for consideration across all seven themes.
- **Themed workshops:** A reference group of technical experts was established for the seven topic themes to provide an expert overview of climate change issues within their respective themes for participants attending a series of theme workshops. The participants at the theme workshops then provided input on the themed climate change responses. These inputs and the views of the appointed technical experts were consolidated into theme reports, which were made available for public comment.
- **Consolidated strategy:** The theme reports were then consolidated into a draft strategy document that was made available for a final phase of public comment. Once all the comments had been reviewed, the draft strategy was revised. This strategy document was submitted to eThekweni Municipality Council for consideration and approval.

Through this participatory approach, the team was able to engage stakeholders more effectively, ensure department priorities were recognised, build buy-in to the process and work towards a strategic implementation Framework approach (both politically and administratively) to enhance the mainstreaming potential of the DCCS.

Steps for Developing the DCCS



Figure 31: The steps to develop the DCCS

Stakeholders

Political leadership – Councillor engagement (meeting)

Municipal administrative leadership – City Manager, Executive Management (meeting and formal email communication)

Sector engagement – Inter-departmental engagement and leadership

Broader engagements – Communities, social groups, environmental organisations, private sector, academia and NGOs

CAP engagement

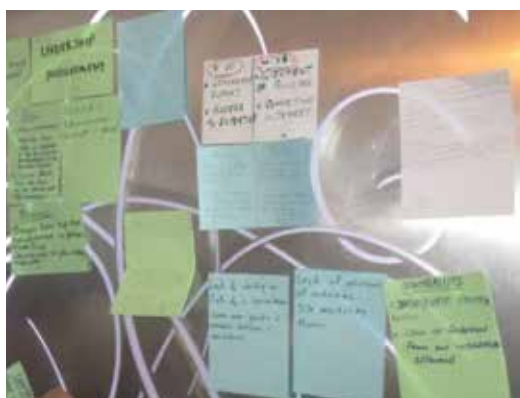
To ensure quality engagement over the short timeframe of developing the CAP, the team focused on priority areas for engagement and incorporated the outcomes from the stakeholder engagement process for the DCCS.

The CAP process involved constant engagement with City officials, repeating the same message of carbon neutrality and climate resilience to frame the discussions. This approach was intentionally followed according to the marketing principle 'the Rule of Seven' so that the message resonates with stakeholders and there is buy-in.

The following methods were used to get stakeholder feedback during the CAP.

- **Pre-launch of the CAP:** The CAP process also leveraged on the establishment of the Municipal Climate Change Governance Framework, which saw the convening of a political Climate Change Body (chaired by the Mayor) supported by a TTT (at the level of executive management). This provided a high-level anchoring of the programme within the Municipality, with its launch coinciding with the formalisation of these governance bodies.
- **Ongoing workshops:** Throughout the development of the CAP, the team hosted six engagement workshops specific to the focus area. The team identified area experts to contribute to discussions and provide feedback. All workshops were structured with group breakaway sessions to provide opportunities for attendees to share their views in an informal setting.
- **One-on-one meetings:** The core team had a number of one-on-one meetings with various stakeholders to inform them of the initiative, solicit input and feedback and identify actions and opportunities that were not previously identified. The one-on-one meetings enabled the team to get in-depth feedback on the CAP, but also helped them to establish relationships with individuals in key departments and sectors.
- **Using indigenous knowledge systems for community engagement:** The team engaged with the University of KwaZulu-Natal to identify ways to engage communities, and to seek local solutions and knowledge around climate change.

This is important as many stakeholders find engaging with the science a challenge and there is a need to ensure that engagements are communicated in a way that relates to the audience.



- **Engagement with the private sector:** One of the key outcomes from the CAP process was the realisation that the Municipality cannot achieve the ambition set out in the goals alone and partnerships are critical. A recommendation from the strategic review was the need to consistently engage the private sector. The team, with support from a consultant, conducted a review of climate change activities in the private sector in Durban through one-on-one interviews, emails, online surveys and workshops. Importantly, the private sector is willing to engage and collaborate, but there is a need to build trust and relationships to ensure consistency and alignment of visions and goals over time.

CHALLENGES



- ☒ A participatory process requires extensive planning and can be limited by budget constraints.
- ☒ Language barriers were a challenge during the public stakeholder engagement process.
- ☒ Phone calls and text messages take up too much time and the outputs from them were limited.
- ☒ Community meetings sometimes resulted in people talking about other service delivery issues and not focusing on climate change.
- ☒ Climate change is not an immediate concern.
- ☒ Strong personalities dominated some discussions during workshops and stakeholder engagement sessions.

LESSONS LEARNED



- ☑ Make use of pre-existing stakeholder databases.
- ☑ There is a need to interpret and align climate change with stakeholder priorities.
- ☑ Consultation provides an education and awareness opportunity.
- ☑ Where language is an issue, ensure that this is considered during the planning phases and that adequate translation is provided.
- ☑ Online surveys are a cost-effective way of gathering feedback.
- ☑ Focus groups and face-to-face meetings are difficult to set up but generate interest and enthusiasm and facilitate detailed inputs.
- ☑ Where possible, ensure that workshops are facilitated by independent, assertive individuals to direct the conversations.
- ☑ Continuous repetition of the objectives enable acceptance and enthusiasm of the outputs.

10.

Towards implementation



Context

The goal of the CAP is to strategically guide the implementation of climate actions in the City. Ideally actions should focus on achieving carbon neutrality and climate resilience. Developing a CAP that is implementable is critical and it is important to consider the practicalities of implementation throughout the CAP process.



EThekweni's approach

During the development of the CAP, the team incorporated a number of initiatives to enable implementation of the plan after completion (Figure 32). However, once the plan was complete, there were a number of other areas that also required attention to support implementation. During the time of finalising this learning journey, the team was working on a few components to enable implementation of the CAP.

During CAP development



Figure 32: Process followed during CAP development

Post-CAP finalisation

Communicate the CAP widely

On completion of the CAP, the team developed a communication plan to inform and engage with various sectors on the CAP and implementation. This included internal official in-City engagements but also engagements with other stakeholders. The team took advantage of various opportunities and other engagements on the climate change issues to seek a platform to present the CAP. There also emerged a need to simplify the CAP to actions that people can implement in their daily lives, which is something the team is focusing on.



Prioritise actions and start incrementally

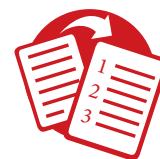
Durban's CAP has 149 actions. In order to implement the Plan, the team realised that it would be helpful to break it down into phases and prioritise projects for the short term.

The team received many recommendations to break down the Plan into a shorter timeframe to help implementers prioritise actions and understand targets over a three-year cycle.

Actions were further prioritised by identifying programmes that:

- Act as enablers for further action
- Are feasible to implement within the next three years from a budget and resource perspective
- Have a high GHG emission reduction and/or climate resilience potential across the City

Using this process, the list of 149 actions was narrowed down to 52 actions.



Develop a resource plan

The prioritised action list was then used to develop a resource plan that allocates timeframes, highlights the costs and sets roles and responsibilities for the prioritised actions. Importantly, the resource plan looks at both human and financial resources required for implementation of the CAP.

During the development of the CAP, the team looked at high-level costs but in many instances, these figures were not available.

Also, it emerged that there was a need to assess what capacity and human resources are required for implementation.

The team set out to have one-on-one meetings with key implementers to agree on:

- The prioritised actions for their sector
- Any additional actions
- The costs allocated and further estimated costs
- Whether budget had been allocated for the project
- The number of additional staff it would require to support implementation
- The indicators of success

The resource plan provided a smaller workable list of actions, which were narrowed down into what was budgeted and was required additional funding. A workable project list could then be used to identify suitable additional funding sources based on the type of project and the support available locally, nationally and internationally.

NB: Finance is a major barrier to implementation, however, some departments have incorporated climate change criteria into existing projects to reduce costs and to climate-proof initiatives. Further opportunities to incorporate these criteria are being explored.



Develop and implement a monitoring and evaluation (M&E) approach

During the development of the CAP, the action list focused on M&E indicators and the City outlined an approach to monitor and evaluate implementation of the CAP. This approach needed to be refined and linked to Key Performance Areas so that there is accountability associated with the implementation of the CAP.

M&E is often viewed as onerous and is dependent on various stakeholders providing accurate, up-to-date data to track progress. To simplify the approach, the team is seeking guidance from stakeholders on what indicators they are currently reporting on to identify if these can be used or modified to track the progress of the CAP.

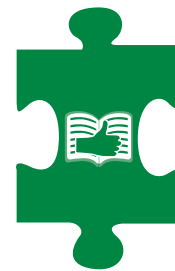
The City has also committed to reviewing and revising the CAP every five years, which will not only enable the team to update the CAP based on progress, but also to incorporate new developments in the space.





11.

Lessons learned



3. Set yourself up

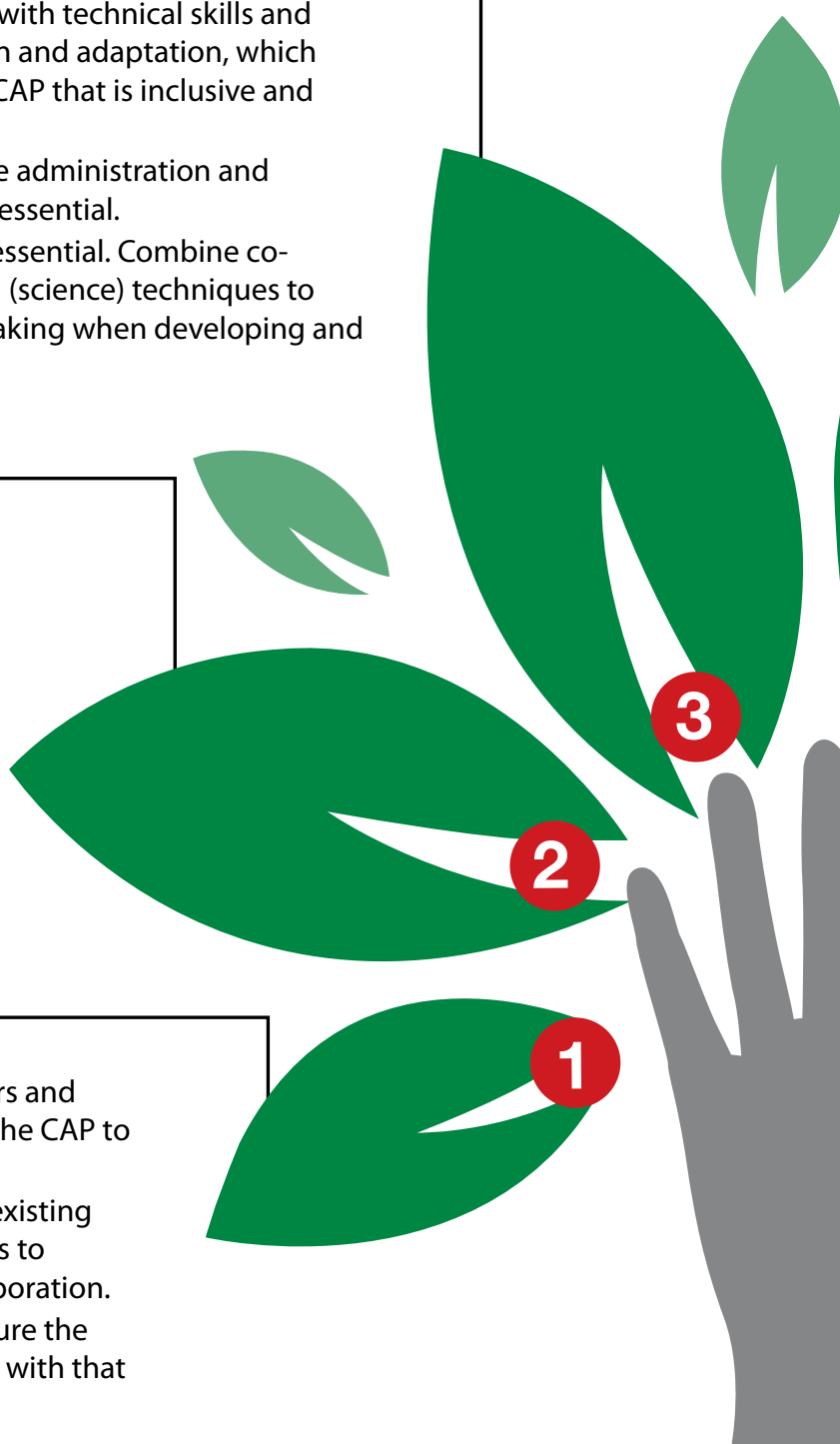
- Secure support from relevant decision-makers during early stages of developing the CAP and communicate with relevant stakeholders throughout the process.
- Establish a strong core team with technical skills and experience in both mitigation and adaptation, which is essential for developing a CAP that is inclusive and representative.
- A support team to coordinate administration and communication processes is essential.
- Stakeholder engagement is essential. Combine co-creation and evidence-based (science) techniques to enable informed decision-making when developing and prioritising actions.

2. Know your story

- Don't be afraid of repeating your message; repetition solidifies understanding and relevance.
- In the face of challenges, be prepared to compromise, but stay committed to the overall goal and objectives of the CAP.

1. Know your city

- Understand your city's powers and strengths when developing the CAP to enable implementation.
- Use and build on your city's existing priorities, policies and actions to facilitate departmental collaboration.
- Present a united vision – ensure the project vision is in alignment with that of the city.





4. Documentation is key

- Establish a document management system from the outset that keeps clear records, no matter how trivial they may seem.
- Timeous sharing of project documentation with relevant stakeholders ensures the inclusion of critical input and secures early consensus.
- Establish a document sharing protocol to ensure that the latest approved documents are circulated.

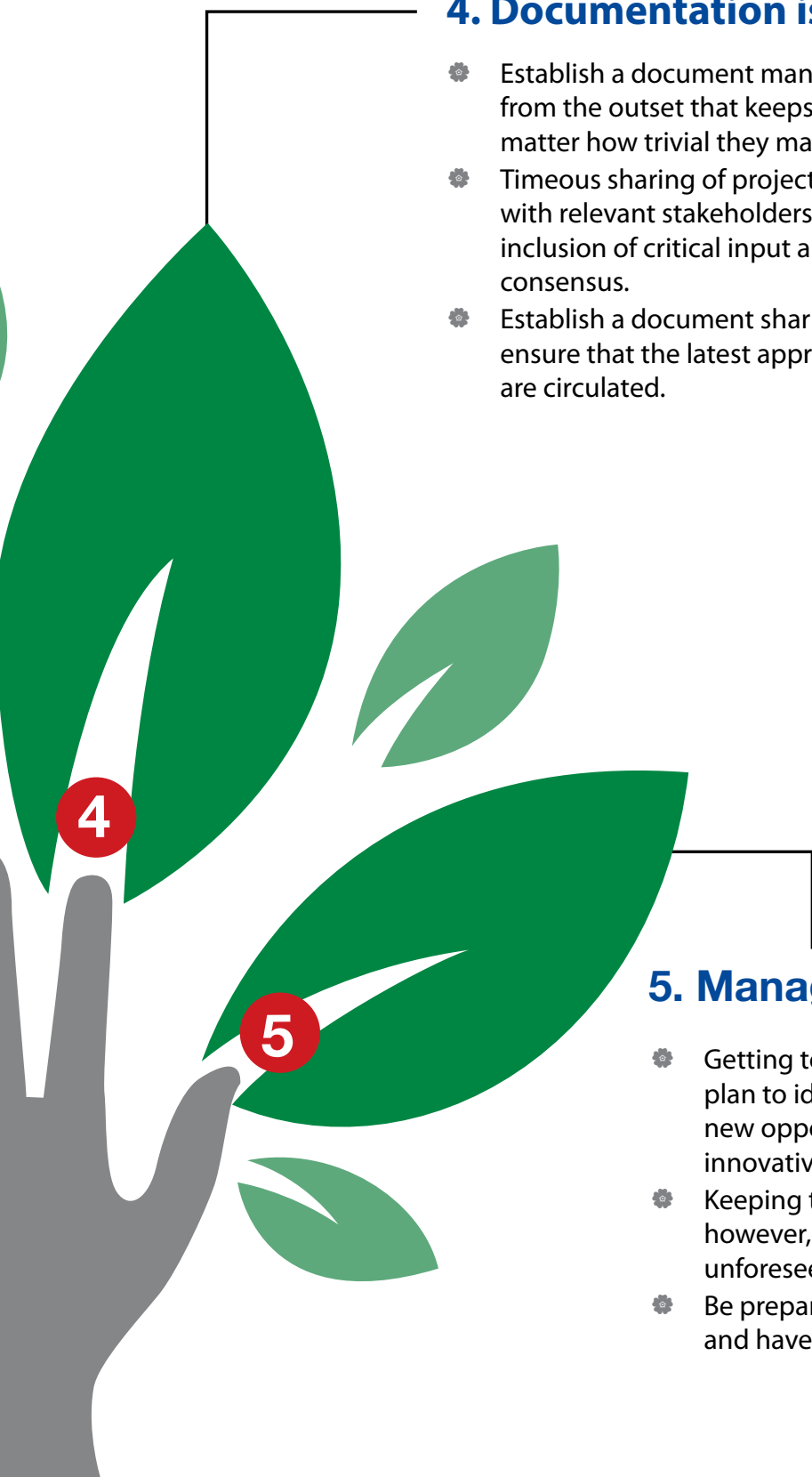
“

Use the journey of developing the CAP to facilitate a transition to institutionalise climate change and identify transformative actions.

”

5. Manage expectations

- Getting to zero is difficult – use the plan to identify quick wins, unlock new opportunities and promote innovative solutions.
- Keeping to timeframes is vital, however, be prepared to adjust for unforeseen situations.
- Be prepared for institutional changes and have a contingency plan.



12.

Durban case studies



The team decided to include case studies to illustrate climate action in the City and to emphasise that implementation can and should take place before and during the development of the CAP. The case studies aim to provide examples of a range of projects at different stages in the project lifecycle and also to illustrate climate change mitigation and adaptation initiatives.

The case studies here are:

- *Transformative, early phase mitigation programme: Zero Emissions for New Buildings by 2030*
- *Pilot community adaptation project: Palmiet Road Rehabilitation Project*

South Africa New Buildings Programme (NBP)

Durban's future – Zero emissions for new buildings by 2030

The C40 New Buildings Programme (NBP) is being implemented in four cities across South Africa (eThekweni Municipality, the City of Cape Town, City of Johannesburg and City of Tshwane). The NBP aims to accelerate the uptake of new buildings that have an ultra-low to zero carbon profile with the intention of unlocking future carbon emission reductions and savings. This will be achieved through legislative requirements on key aspects of buildings. A building typically has a lifespan of about 40 to over 100 years and should it be constructed to emit almost no carbon during the operational life of the building, the future carbon savings will be significant. This is especially valid as the building sector contributes more than a third of global carbon emissions.

The NBP team in eThekweni Municipality developed a work plan in order to get the programme off the ground (Figure 33).

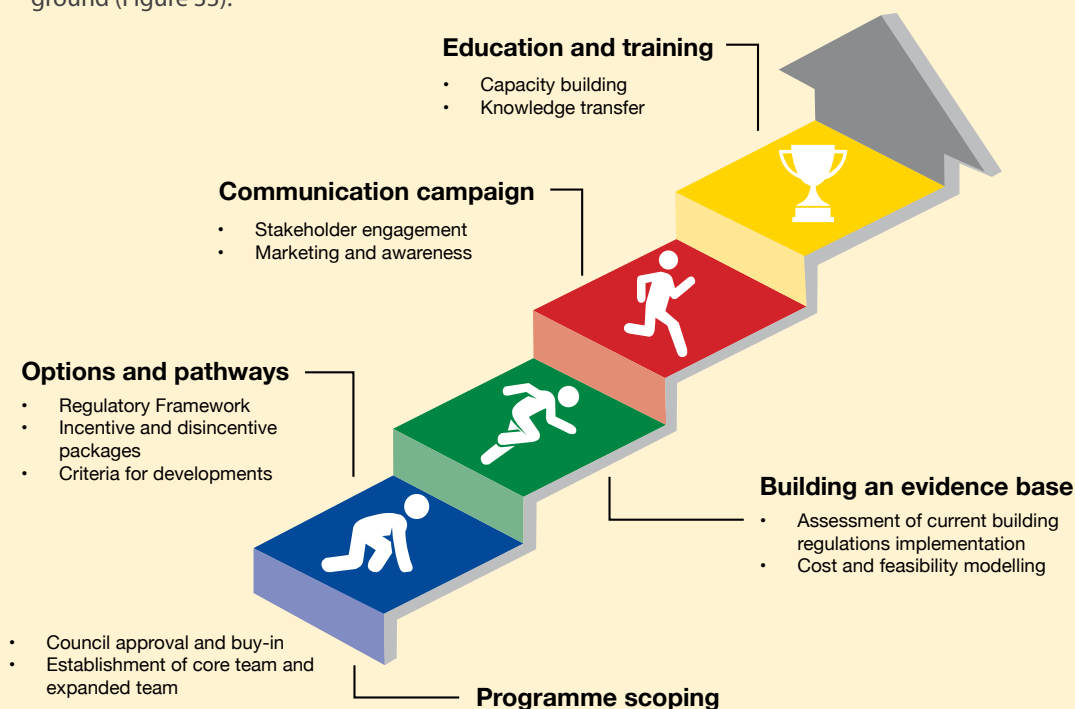


Figure 33: The project process of eThekweni Municipality's New Building Programme

LESSON LEARNED 1: FOCUS ON EXTENSIVE STAKEHOLDER ENGAGEMENT

Municipalities are highly complex and socio-technical systems, and it was realised that any project would need to optimise the interactions between people, procedures and environments. The programme used extensive consultations and a strong evidence base. A core team was set up to guide the strategic progression of the Programme, and also an expanded technical task team that would contribute relevant technical details to the Programme, e.g. architecture, electricity, town planning, legal, revenue departments, etc.

The departments that were on the expanded technical task team were interviewed, and their challenges and opportunities were mapped out (Figure 34). This enabled a shared understanding of challenges and provided a starting point for engagement.



Figure 34: Stakeholder mapping

LESSON LEARNED 2: USE INCENTIVES TO PROMOTE ULTRA-LOW AND ZERO CARBON BUILDINGS

One of the major factors identified as inhibiting growth in the ultra-low to zero carbon building industry is the perception that these buildings come at an increased capital cost combined with the difficulties of quantifying associated returns on investment and externalities. In addition to this, the NBP received differing legal opinions on whether eThekweni as a local government has the authority to develop and enforce laws that surpass the requirements held by national government. A solution, identified by eThekweni's Revenue Unit, came in the form of offering a voluntary incentives approach to developers that met the requirements of constructing an ultra-low to zero carbon building. Economic incentives are a common practice used to boost investment, stimulate economic growth and create employment within a specific region or sector.

Together with the Economic Development Unit, the NBP is working on developing a legal mechanism in the form of a by-law and through amendments to the land-use management scheme that will ensure compliance of the NBP. Several working groups have been established in order to drive the various technical aspects of these legal mechanisms such as energy efficiency, renewable energy and sustainable development.

Conclusion

While buildings play a prominent role in reducing GHG emissions in the City, there are still challenges, as it requires rapid mobilisation of supply chains, finance, citizen engagement, gathering and reporting of building energy use data, and enforcement of the appropriate building standards. Additional barriers include public perception of higher costs associated with green buildings and navigating through the complex socio-technical systems within a city. A key part of the success of the NBP thus far has been through its inclusive and participatory planning processes.

Palmiet Road Rehabilitation Project

The PRRP is an innovative shared-governance approach to catchment-scale ecological infrastructure management with a climate change adaptation focus. The project primarily focuses on conservation, rehabilitation and restoration of natural systems within the Palmiet Catchment to improve community resilience.

The project aims to address multiple challenges within the Palmiet Catchment to improve governance processes along with physico-chemical, ecological and socio-economic conditions with the following objectives:

- Construct artificial wetlands at strategic positions along the Palmiet River to restore watershed services and mitigate flooding along the river.
- Clean-up of the Palmiet River to remove solid waste and debris before construction of the artificial wetlands.
- Remove alien plants and revegetation of the Palmiet River banks with indigenous plants to stabilise the riparian zones.
- Conduct awareness campaigns and develop educational materials on illegal dumping for the communities living along the river banks.
- Monitor and reduce water pollution and its impact on the river.

The main problems within the catchment are: pollution and habitat transformation related, which have caused health and flooding issues and the loss of biodiversity. For example, the Palmiet (*Prionium serratum*) after which the river is named, has disappeared. This plant is endemic to South Africa and is sensitive to changes in water quality, and, therefore, a good indicator species of water quality problems. Sources of contamination include:

- Informal settlements built in wetland areas and along the banks of the Palmiet River have adverse impacts on the system. The constant flushing of various waste materials directly into water sources has resulted in a deterioration of water quality. Equally, the informal settlements have been negatively impacted by flooding events, resulting in fatalities and damage to property.
- Illegal dumping by non-informal settlement residents, illegal gill netting, industrial chemical discharge and sand mining along rivers.
- Storm water management system failures exacerbate the degree and the frequency of river pollution events.
- Invasive alien species proliferation compounds the main problems, particularly shallow-rooted species that do not stabilise river banks and block drainage systems.



Actions to address the challenges

The preliminary implementation stages of the project proved to be difficult because of the fraught relationship between the Municipality and the communities surrounding the areas that were earmarked for wetland reconstruction (adjacent to informal settlements near the confluence of the Palmiet and the uMngeni rivers).

In a parallel but related process, researchers from UKZN were working on a community research project and had established a close working relationship with the Quarry Road informal settlement leadership. A process to bring a wide range of catchment stakeholders into a catchment management planning process with UKZN was initiated. The process presented an opportunity to establish multi-sectoral collaborations to mobilise resources through a shared governance approach and the development of the project.



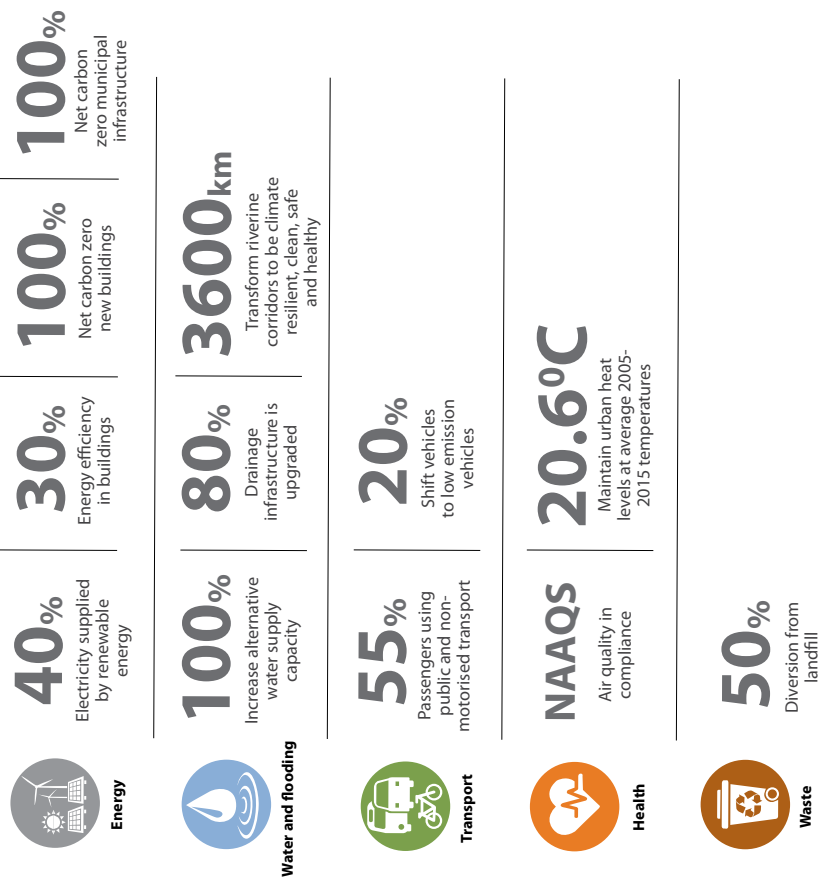
The communities within the Palmiet River Catchment, including those of the vulnerable Quarry Road West informal settlements, became project stakeholders. This arrangement encouraged community engagement and raised awareness on different communities' experiences with the conditions of the catchment. A formal committee consisting of community leaders that provide support to the ward councillor and help disseminate information to the community, was used as a vehicle to create awareness and bring the project closer to the informal settlement residents. This collaborative approach brought existing catchment champions like the Palmiet River Watch and municipal line functions into a shared governance Framework that opened communication channels to collate existing data, prioritised actions and helped avoid duplication of effort.

Following the stakeholder engagement process and the development of a concept note, prioritised action items to address challenges within a project action plan were developed and endorsed. The action plan identified project actors, roles and responsibilities for the proposed solutions to catchment issues. The identified issues are spread across three broad themes: governance, social and biophysical approaches.

Vision and targets for Durban

The vision of the Durban CAP is:
'by 2050 eThekweni is a sustainable, climate resilient city, where people's needs are prioritised.'

Medium term – 2030



Long term – 2050



To achieve this vision, Durban has set out interim and long-term targets, as well as specific actions to enable the City to meet those targets. Achieving these targets would be aligned to the sustainable development principles of economic, social and environmental. The image below provides a snapshot of the interim and long-term targets to achieve the City's vision.

List of acronyms

BAU	Business as Usual
C40	C40 Cities Climate Leadership Group
CAP	Climate Action Plan
CCC	Climate Change Committee
CCP	Cities for Climate Protection
CCRA	Climate Change Risk Assessment
CO ₂	Carbon Dioxide
COP	Conference of the Parties
DAC	Durban Adaption Charter
DCCS	Durban Climate Change Strategy
DCM	Deputy City Manager
DEA	Department of Environmental Affairs
DM Amend Act	Disaster Management Amendment Act 16 of 2015
D'MOSS	Durban's Metropolitan Open Space System
DSW	Durban Solid Waste
EO	Energy Office
EPCPD	Environmental Planning and Climate Protection Department
ETA	EThekweni Transport Authority
GCM	General Circulation Model
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GPC	Global Protocol for Community-scale GHG Emission Inventories
GTS	Green Transport Strategy
ICLEI	Local Governments for Sustainability
IDP	Integrated Development Plan
IKS	Indigenous Knowledge Systems
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
MILE	Municipal Institute of Learning
M&E	Monitoring and Evaluation



MCPP	Municipal Climate Protection Programme
NAS	National Adaptation Strategy
NAMA	Nationally Appropriate Mitigation Action
NCCRP	National Climate Change Response Policy
NDCs	Nationally Determined Contributions
NDP	National Development Plan
NMT	Non-motorised Transport
RCPs	Representative Concentration Pathways
SDGs	Sustainable Development Goals
SWOT	Strengths, Weaknesses, Opportunities and Threats
SDF	Spatial Development Framework
TTT	Technical Task Team
UNFCCC	United Nations Framework Convention on Climate Change





MILE is a knowledge management initiative of the eThekweni Municipality.

As an Institute of Learning, MILE aims to enhance the capacity of local government practitioners. One of the key learning mechanisms in achieving this goal is the MILE Master Class, which is essentially an action learning engagement lead by 'experts' drawn from either eThekweni Municipality or one of its learning partners across the Continent.

Aim

To be Africa's premier learning institute for local government practitioners.

Mission

"To be Africa's most prominent knowledge hub in local government."

MILE's overall mission is to support African municipalities with capacity and knowledge in order to be effective in the delivery of local government's core competencies. It was established in 2009 as a signature programme to engage thought leaders, experts, change agents, researchers and policy makers to help shape universal development agendas.





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