momentum METROPOLITAN

Task Force on Climate-Related Financial Disclosures

2022

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Contents

About this report

Momentum Metropolitan is one of South Africa's largest diversified financial services companies. Our business is about protection (life and non-life), investments and long-term savings, and we conduct it through Momentum, Metropolitan and Guardrisk brands. Outside South Africa, we operate in five African countries through Momentum Metropolitan Africa, which includes Botswana, Ghana, Lesotho, Mozambique, and Namibia. Momentum Investments has operations in the United Kingdom and Guernsey. The Group has a health insurance joint venture in India and Guardrisk has businesses in Gibraltar and Mauritius.

Momentum Metropolitan Holdings Limited (hereafter, Momentum Metropolitan or the Group) formally signed up as a supporter of the Task Force on Climate-Related Financial Disclosures (TCFD) in June 2021, and we released our first TCFD report in December 2021.

This report is our second set of climate-related disclosures, in line with the TCFD-recommendations. It outlines our approach to climate change and the steps we have taken in support of our commitment to climate action. The data in the report relates to the financial year from 1 July 2021 to 30 June 2022 (F2022). Where specific exclusions apply, these have been indicated. The reporting period extends to the end of October 2022.

The World Economic Forum (WEF), in its Global Risks Report 2022, ranks "climate action failure" and "extreme weather" as the two most potentially severe risks for the next decade. An urgent, collective response is needed to limit the global temperature increase to 1.5°C above pre-industrial levels. Collective action will avert the most severe climate impacts, as per the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report.

Momentum Metropolitan recognises our responsibility to build a resilient society and environment in the way we do business. We also recognise the need to accelerate our climate performance and have found the TCFD recommendations to be a useful framework in developing our roadmap for this journey.

Related reports

This report should be read in conjunction with:

- Our ***2022 Sustainability Report***, which provides insight into our Sustainability Framework, related performance, and future commitments
- Our ***2021 Stewardship Report***, which demonstrates the extent to which we have aligned our responsible investment practices with the United Nations supported Principles for Responsible Investment (PRI)
- Our ***2021 PRI Assessment and 2021 PRI Transparency Report***, which detail our progress with responsible investment practices
- Our ***2021 CDP submission*** and ***2022 Carbon Footprint Verification statement***. At the time of publication our 2022 CDP submission was not yet scored but is publicly available.

About this report continued

Timeframe classifications

The nature of climate change impacts is considered in the long term and the timeframes for understanding climate change risk are heavily reliant on the Paris Agreement, which puts the expected science-based global impact on a 2050 timeline. This timeline is also considered when doing scenario analysis, which TCFD recommends (See page 13 for our approach to timeframes in scenario analysis).

This differs from the risk management timeframes applied within the business to do strategic planning.

- Short-term: The short-term horizon is 6 to 12 months.
- Medium-term: The medium-term horizon is 1 to 3 years.
- Long-term: The long-term horizon is 3 to 5 years.

Report boundary, assurance, and approval

We report on Momentum Metropolitan and the combined material input from our six business units as set out on page 6 of the 2022 Sustainability Report. This report's information was prepared and provided by Momentum Metropolitan's various businesses, based on the Group's internal reporting and information systems and processes.

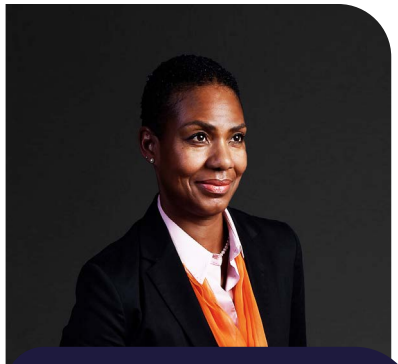
Our carbon footprint is subject to external assurance by Verify CO_2, who provided limited assurance on the Group's carbon emissions.

The Board acknowledges responsibility for the integrity of this report. The members of the Social, Ethics and Transformation Committee (SETC), and the Board, Risk, Capital, and Compliance Committee (BRCC) on behalf of the Board, have applied their minds to the report and believe that the information is reliable, and that it fairly presents the Group's climate disclosures, aligned with TCFD.

Sharron McPherson
Chair: Momentum Metropolitan Social, Ethics and Transformation Committee

David Park
Chair: Momentum Metropolitan Board Risk and Capital Compliance Committee

Leadership statements



Dr Sharron McPherson
Chair: Social, Ethics and Transformation Committee

Climate-related disasters are increasing in severity and frequency around the world, exposing the vulnerability of our economic, social, and political systems. Greater commitment and coordination is needed at a global, regional, and local level if we are to secure our collective future.

Momentum Metropolitan's purpose is to enable businesses and people from all walks of life to achieve their financial goals and life aspirations. The Group's Reinvent and Grow strategy emphasises the creation of long-term sustainable value for our stakeholders. Aligned to this, our new Sustainability Framework, launched in June 2022, articulates our commitment to integrate and collaborate on all sustainability matters across the Group.

All ambitions we might have for prosperity is built on the foundation of the natural world. That is why environmental stewardship is a priority for us. Climate action must be embedded in all our business decisions, based on sound governance and ethical practices. We already have this in place at Momentum Metropolitan, but we know that we need to rapidly improve our understanding of climate change and explore new technologies and science-based planning tools to build resilience into our business response.

This will necessitate investment in curated learning and capacity building on climate and sustainability issues at all levels of our organisation. We believe in the transformative potential of collective learning and action and are committed to this journey.

David Park
Chair: Board Risk, Capital and Compliance Committee

Climate change is a real risk that affects the sustainability of our economic markets and the institutions (financial and non-financial) that operate in these markets. The financial sector is used to modelling and accounting for uncertainty, and while climate change is immensely complex, it is perhaps the greatest opportunity we have to utilise the diverse set of specialist skills concentrated in our sector, to mitigate the risks and support the stability of the sector and society. The Task Force on Climate-Related Financial Disclosures offers our businesses the opportunity to improve their understanding of the long-term climate-related risks and opportunities that will impact them.

Climate change is a key strategic risk for our business and should be managed with the same rigour and purpose as other risks. We support the World Economic Forum Principles and the King IV Guidance on the responsibility of oversight committees in responding to climate change. We also want to support society through the transitioning of the economy as we recognise the social risks inherent to this challenge.

At Momentum Metropolitan, the Board Risk, Capital, and Compliance Committee (BRCC) approves (with input from key stakeholders) the risk appetite for climate change related risks. It provides independent oversight of the design, implementation and adherence to our internal climate change risk management procedures and the effectiveness thereof at a Group level.

The BRCC will continue to fulfil this responsibility but recognises the varied touchpoints and intersections with other Board committees on climate care. We are reviewing the governance of climate change across Board committees, to ensure that the Group is well-positioned for sustainability.

Background and context

SUMMARY: KEY MILESTONES ON OUR TCFD JOURNEY

The TCFD recommendations were developed to improve transparency and trust on the reporting of climate-related risks and opportunities. Companies are encouraged to make climate-related disclosures based on a unifying set of principles that enable market participants to fairly assess the value and ability of firms in dealing with the risks and opportunities presented by climate change impacts.

According to the 2022 TCFD Status Report, climate-related financial disclosures have been steadily increasing worldwide. TCFD-aligned disclosure is now mandatory in various jurisdictions such as the United Kingdom and New Zealand. In South Africa, TCFD is voluntary, but compliance is considered essential for companies committed to climate action.

The four thematic areas of the framework represent the core elements of how organisations operate. Disclosures in each category thus provide good insight into a company's climate response.

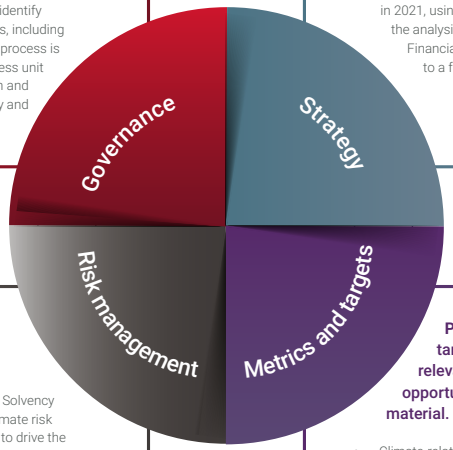
Momentum Metropolitan's progress since its first disclosures in December 2021

PURPOSE: Disclose the organisation's governance around climate-related risks and opportunities, including the role of the Board and management.

- The **Sustainability Forum** was optimised to coordinate collaboration and to drive strategic initiatives. It meets monthly and engages in continuous learning to build climate competence.
- To embed the **Sustainability Framework**, business units embarked on a structured process to identify sustainability-related risks and opportunities, including climate risks and opportunities. Where this process is completed, governance processes at business unit level are formalised to drive implementation and are integrated into the Group's sustainability and climate governance structures.

PURPOSE: Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.

- The Group has committed to integrating climate-related risks and opportunities into the corporate strategic planning process in F2024.
- Momentum Metropolitan conducted scenario analysis in 2021, using customised scenarios. This year, we used the analysis framework of the Network for Greening the Financial System (NGFS). This shift was done to align to a framework developed for the financial sector.



PURPOSE: Disclose how the organisation identifies, assesses, and manages climate-related risks.

- In addition to following the Own Risk and Solvency Assessment (ORSA) process, a Group climate risk framework was developed and approved to drive the consistent identification, assessment, measurement, monitoring and management of climate risk across the Group.
- A Climate Risk Steering Committee (Climate Risk SteerCo) was formed to embed the framework throughout the business.

PURPOSE: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities, where such information is material.

- Climate-related metrics and targets are being clarified and expanded as business units finalise their commitments under the climate pillar of our Sustainability Framework.
- The Group committed to start work in February 2023 on a transition plan to net zero for our own and financed emissions.

Background and context continued

CLIMATE CHANGE DEVELOPMENTS

A world at risk

The negative impacts of climate change are mounting faster than scientists anticipated. The window to sustain a liveable world will rapidly close if global mitigation (reducing and stabilising the levels of heat trapping greenhouse gases) and adaptation efforts (adjusting to present or future climatic impacts) are delayed further.

The scientific consensus is that the current levels of global warming are human induced, driven by our reliance on carbon-based fuels for economic growth and progress.

According to the United States National Oceanic and Atmospheric Association (NOAA) 2021 Global Climate Report:

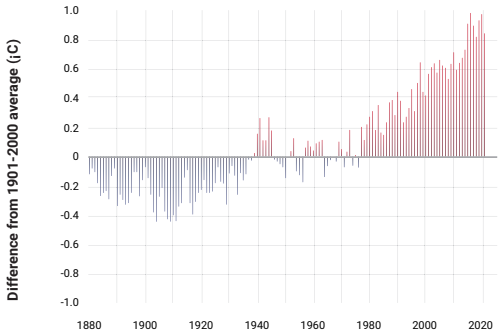
- 2021 was the sixth-warmest year on record, based on data collected since 1880
- Surface temperature increases, averaged over land and sea, showed a 0.8°C increase from the 20th-century average and a 1.04°C increase from the pre-industrial period (1880-1900)

These climatic shifts have been fuelling extreme weather events globally and locally and we are quickly approaching the global threshold of limiting warming to 1.5°C to ensure a climate-safe future.

Extreme weather attribution entails mapping the human contribution to extreme weather events, particularly extreme heat events and extreme flooding. As this discipline grows, it provides the scientific basis for all role players in society to support the low-carbon transition. A 2021 analysis by Carbon Brief, assessing 400 peer-reviewed studies, showed that for 56% of flooding events and 68% of drought events studied, human activity made the event more likely or more severe.

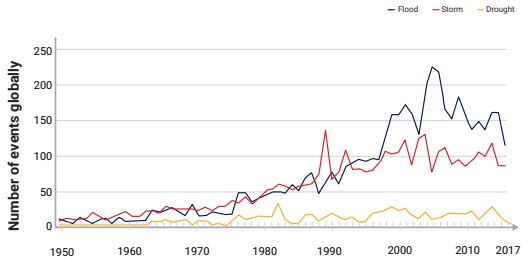
Global perspective

Global average surface temperature



Source:https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature

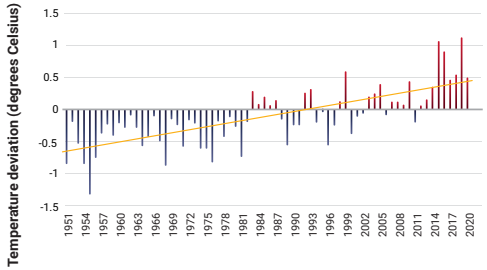
Extreme weather on the rise



Source: The Emergency Events Database (EM-DAT) | www.emdat.be | Reported events, not controlled for any variables

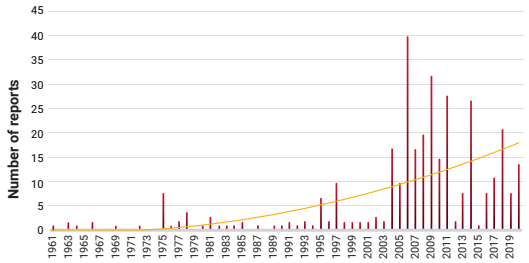
Annual average surface temperature deviation for South Africa (base period: 1981 - 2010)

(based on the data for 26 long-term climate stations)



Source: Annual state of the climate 2021 South African Weather Service (SAWS)_WCS-CLS-ASC-2020

Reports of heavy rain and flooding in Gauteng (1961 - 2020)



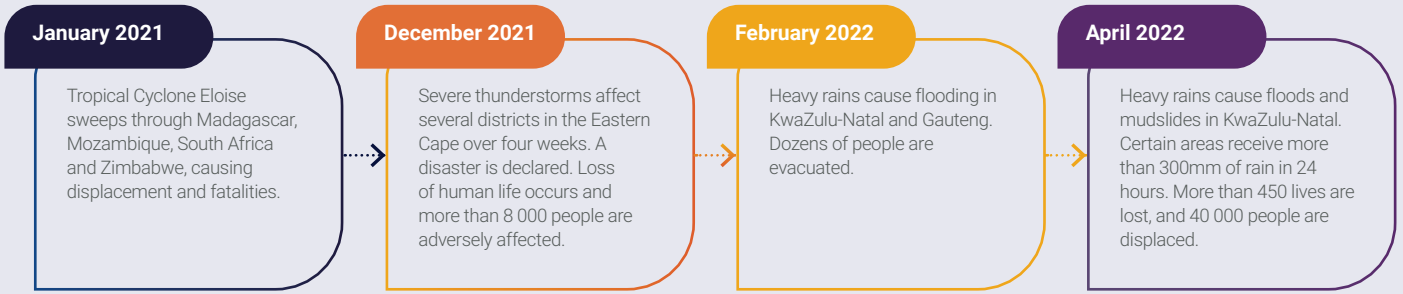
Source: Regional Weather and Climate of South Africa, South African Weather Service (SAWS)_ WCS-CLS-REGIONAL_CLIMATE_GAUTENG.001

Local perspective

Background and context continued

Timeline of selected climate impacts 2021–2022

SOURCE: https://Reliefweb.int



The socio-economic challenges of poverty and inequality in South Africa expose vulnerable communities to the most adverse effects of climate change. Momentum Metropolitan recognises the need to support global and national efforts toward mitigation and adaption, and to build resilience at community level. Read more about our investments linked to the Sustainable Development Goals (SDGs) and support for green jobs in the 2022 Sustainability Report on page 30 and 37.

Context framing our response

The climate crisis is occurring within the context of a highly interconnected world. Shifts related to global climate commitments, geopolitical concerns and planetary boundaries are linked to the natural resource constraints the world experiences and amplifies localised social challenges.

At Momentum Metropolitan, we acknowledge this complexity and have mapped the following themes in the external environment that we consider to be relevant to our response.

Global commitments

- The Paris Agreement, adopted at COP21 in 2015, set the goal of limiting global warming to well-below 2°C while urging for climate mitigation pathways aligned to capping warming at 1.5°C by 2100. To achieve this, countries said they would aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a net-zero world by mid-century.

Intensifying disclosure

- Various climate-related disclosure frameworks based on the four TCFD pillars have emerged. Stakeholders are increasingly demanding data transparency in climate claims. This requires strong measurement frameworks to support robust stakeholder engagement.

Responsible investment imperative

- The Russia-Ukraine war brought tension between the need for energy security and ambitions for net zero, challenging ESG-conscious investors globally. As investors we must continue to address the risks of climate change and support the Just Transition to a low-carbon economy. This is the cornerstone of our responsible investment climate imperative.

Clarifying pathways to the Just Transition

Momentum Metropolitan has signed the PRI-led international statement of investor commitment to support a Just Transition on climate change. The Grantham Institute defines a Just Transition as "Climate Action + Social Inclusion". We are aligned with the initiative's three pillars: distributive, restorative and procedural justice. As our business units formalise their climate commitments, it deepens our understanding of what the Just Transition means for Momentum Metropolitan.

Background and context continued

A Just Transition for South Africa

South Africa's response to climate change and its transition to a low-carbon economy, will result in negative impacts for certain sectors of the economy. Without sufficient support, the social, economic, and environmental consequences will be significant for the country, its economy, and businesses such as ours.

Through our membership of the National Business Initiative (NBI), we participated in the deliberations of the Presidential Climate Commission (PCC) and support its "Framework for a Just Transition in South Africa", including the guiding principles.

According to Statistics South Africa, our country's unemployment rate stands at 33.9% (Q2:2022). This unacceptably high figure speaks of socio-economic hardship in our country. Any transition towards a low-carbon economy that pushes unemployment even higher will result in further erosion of household purchasing power, increased levels of poverty and increased social unrest – with additional negative consequences for the natural environment.

At the same time, South Africa's dependence on fossil fuels contributes to climate change while being detrimental to human health. A significant reduction in greenhouse gas (GHG) emissions is urgently needed.

We believe the transition must fairly balance environmental concerns with South Africa's need for socio-economic development. Opportunities to develop new low-carbon sectors and maximise employment must be explored. All stakeholders should enable on-the-job training and reskilling, and those worst affected should receive support.

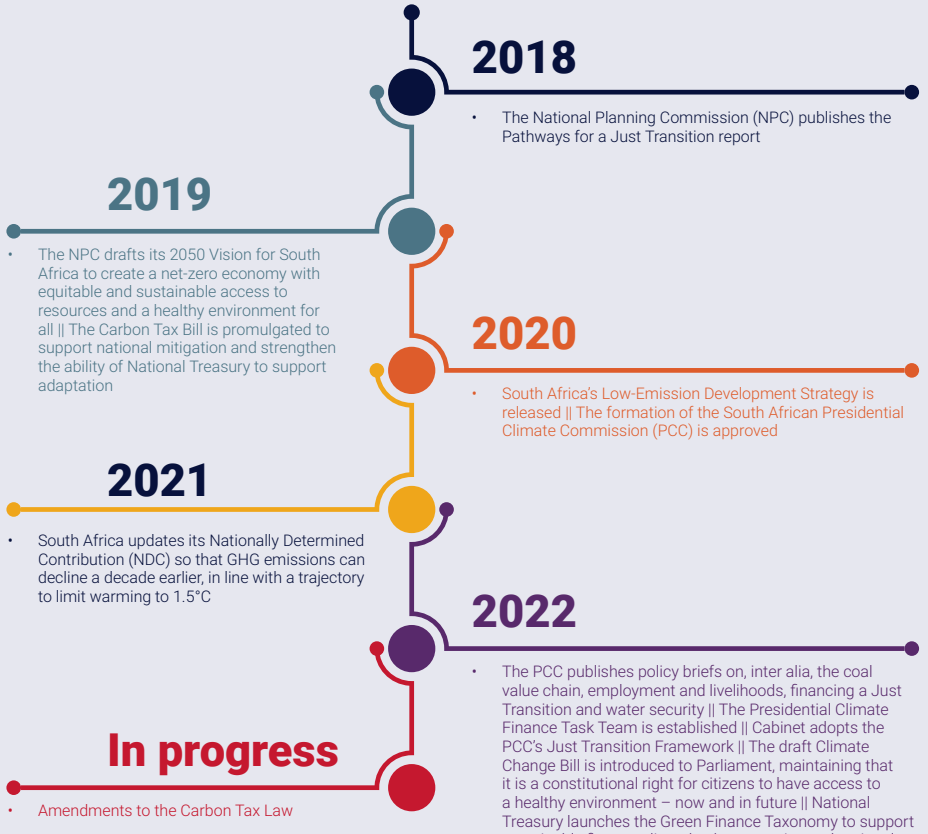
As a South African business, we support the PCC Framework's call for businesses to:

- use corporate social investment to stimulate enterprise and skills development
- incorporate climate risks and opportunities into business strategies and decisions
- employ the recommendations of the TCFD to disclose climate change impacts in financial statements and use climate-related scenarios to understand future impacts
- develop Environmental, Social and Governance (ESG) skills throughout the organisation
- set science-based GHG reduction targets that consider equity and fair-share approaches
- disclose ESG impacts through annual reporting and international initiatives such as CDP

We believe the transition must be people-centered and aligned with the Constitution of South Africa. Clause 24 states that everyone has the right to "an environment that is not harmful to their health or well-being", and "to secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."

Policy developments in South Africa

Momentum Metropolitan supports policy and regulatory developments to facilitate South Africa's just transition to a low-carbon economy. We continue to monitor these processes to inform our own climate policies and strategies.



COP27

The most significant outcome of the UN climate negotiations (COP27) held in Sharm El-Sheikh, Egypt, was the agreement for a losses and damages fund to support vulnerable countries at risk of climate impacts. The idea of a such a fund was put on the table in the 1990s by island nations who face destruction due to sea level rise. Although the fund is a welcome development there is no clarity yet on who will contribute to it.

South Africa's Just Transition work featured at the summit. President Cyril Ramaphosa handed over the country's Just Transition Investment Plan to the International Partners Group – the United Kingdom, United States, Germany, France, and European Union – who pledged an initial $8.5 billion for South Africa's Energy Transition at COP26.

There were strong calls for countries to accelerate the adoption of renewable energy, but no strong commitments made to curb greenhouse gas emissions.

Source: www.wri.org

Background and context continued

Our approach to climate change

Our Sustainability Framework includes a set of strategic pillars and enablers to formalise implementation and drive impact. Rather than having a separate climate strategy, our climate change response forms part of our Sustainability Framework. The strategic pillar, *Help build the low-carbon economy*, speaks directly to this. To demonstrate how we see this integration: the enabler related to digital-led innovation creates new opportunities for climate mitigation and adaptation while advancing financial access and inclusion. We also rely increasingly on the intelligence of data ecosystems and platforms to manage various aspects of our climate performance, ranging from energy efficiency to directing portfolio construction.

Strategic Pillars

Make financial services more inclusive

- Low-cost offerings
- Access to advice
- Future proofing business

Enhance financial security and health

- Financial education
- Continuous client-engagement
- Treating customers fairly

Help build the low-carbon economy

- Greening our operations
- Investing in the green economy
- Climate positive products and innovations

Priorities

Strategic Enablers

- Responsible business practices, ethics and accountability
- Digital-led innovation
- Diversity and future-fit skills
- Partnerships for systemic change

The Group follows a bottom-up approach for business units to develop their commitments and targets in respect of these strategic pillars. We understand that climate change could impact our ability to deliver on our overall sustainability performance, which is driven by our various businesses. We have started our journey to understand in more detail, the impacts of climate change risk for our Non-life, Life, and Investment businesses. We will continue to assess the impact of climate change risk on our plans across all strategic pillars.

The Group made the decision to pursue net-zero targets linked to the preferred goal of limiting global warming to 1.5°C to accelerate our climate action. A workgroup, supported by the Sustainability Forum will start the research and analysis in February 2023 to develop a framework that will guide prioritisation, resourcing and implementation.

Background and context continued

Timeline of our climate change journey

Our Sustainability Framework and ambition towards net zero are recent developments in Momentum Metropolitan's climate journey. We have built a solid foundation over many years with our adherence to best practice frameworks, global commitments and policies informing prudent climate practice.

2006

- Momentum Metropolitan becomes a signatory to the UN-supported PRI

2013

- We submit our first voluntary CDP response on climate change which we continue to date
- We conduct our first carbon footprint analysis

2014

- We set carbon emissions reduction targets

2019

- We adopt the Momentum Metropolitan climate change position statement || We adopt the Momentum Metropolitan climate change investment policy || We adopt a responsible investment policy

2020

- We sign the PRI-led international statement of investor commitment to support a Just Transition on climate change || We affirm support for the Code for Responsible Investing in South Africa (CRISA) || We affirm support for the UK Stewardship Code || We formulate a Group Sustainability Policy Framework

2021

- We commence a review of our sustainability strategy || We reconstitute our Sustainability Forum || We join the World Wide Fund for Nature (WWF) Business Network || We adopt the Group climate risk framework

2022

- We join Climate Action 100+ || The Exco and Board-mandated SETC approves the Sustainability Strategic Framework

Governance

Good governance dictates that the Board oversees any issue that present inherent risk to the sustainability and longevity of an organisation. Per definition, this includes oversight of climate change impacts. TCFD seeks to make explicit the importance of the role of boards in this matter.

Climate action failure is the top, potentially most damaging risk, that would aggravate risks such as involuntary migration, natural resource constraints and youth disillusionment, says the WEF Global Risks 2022 Report. In its modelling of the social impacts of unrestrained climate change, the Centre for Environmental Rights[1] also emphasised the impact on the youth population, already challenged by unemployment and structural inequality. As an ethical, responsible business invested in creating sustainable long-term value, Momentum Metropolitan understands the moral imperative to act on climate change.

Our Group values of accountability, integrity, innovation, diversity, excellence, and teamwork anchor us.

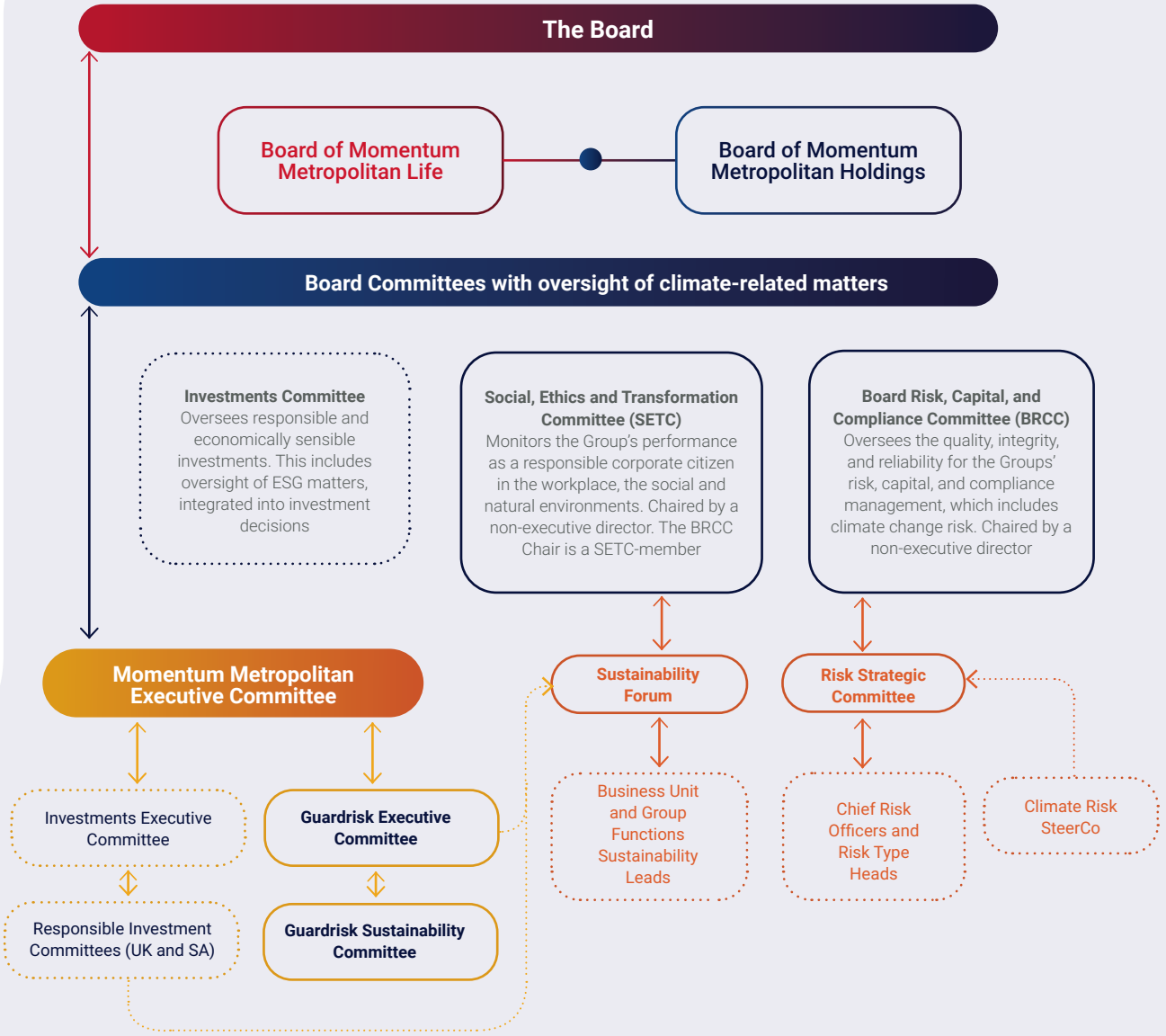
- Accountability
- Integrity
- Innovation
- Diversity
- Excellence
- Teamwork

In addition to our climate and sustainability related policies, we are also guided by our code of ethics which commits us to environmental stewardship in accordance with the relevant laws.

Board oversight of climate change

The Momentum Metropolitan Board is ultimately responsible for the governance and end-to-end process of sustainability, climate risk management and the assessment of its effectiveness, together with delegated Board committees. Climate change will have a significant impact for Momentum Metropolitan and the society within which we operate. Thus, the Board and delegated committees monitor and address material matters relating to climate change to ensure business sustainability. The Board committees with oversight over climate-related matters are the SETC, the BRCC and the Investment Committee. Good corporate governance practices ensure the flow of decision-useful information between the Board, Board committees, management committees and boards of subsidiaries where these structures are in place.

Climate governance at Momentum Metropolitan



[1] The report titled Climate Change Implications for SA's Youth looks at what basic lifestyles and services will look like through 2030, 2040, and beyond for children today and future generations. https://cer.org.za/wp-content/uploads/2021/09/Nick-King-Report-Final.pdf

Governance continued

Management's role in our climate change response

Momentum Metropolitan's executive committee provides supervision with regards to climate change disclosures as well as the identification and mitigation of climate risks and opportunities. Established in 4Q F2021 and chaired by the Group Head of Sustainability, the Sustainability Forum is a senior management advisory committee on operational sustainability matters, including climate change mitigation and adaptation initiatives within the broader business.

Both assessing and managing climate-related risks and opportunities

Group management designation	Reporting line	Role and coverage of responsibility	Frequency of reporting to the Board on climate-related issues
Group Chief Executive Officer (CEO)	Board	Our Group CEO is a member of the SETC and BRCC and ultimately accountable for managing the Groups' performance, inclusive of factors such as climate change that could impede our ability to deliver on our strategic objectives.	Quarterly
Group Finance Director (FD)	Reports directly to the CEO	Our Group FD is responsible for the Groups' business performance and has oversight of all sustainability and climate change initiatives within the business, including managing the financial impacts of sustainability-related risks.	
Group Sustainability Head	FD reporting line	Group Sustainability is the custodian of environmental matters within the Group and supports the identification, assessment and management of climate-related and broader sustainability risks and opportunities. It fosters the implementation of policies, frameworks, and strategy.	
Dedicated responsible investment team	Chief Investment Officer reporting line	Responsible for considering the environmental, social and governance risks of assets we invest in, as it is relevant for the overall investment objective – across all asset classes, sectors, markets and over time.	

Climate skills and training

We recognise that the development of climate and broader sustainability-related skills is a critical enabler for advancing our climate change response. Current expertise is bolstered by a focus on sustainability as a pillar in our formal Executive Leadership Development Programme and learning opportunities for business unit sustainability leads who are all at senior management level.

The SETC members' specialist skills encompass transformation, diversity and inclusion, global climate policy, and nexus modelling, which assesses the interconnectedness of land, water, food, and energy systems and integrates these externalities into large infrastructure financing models. This is complemented by actuarial and management experience in financial services, with a focus on long-term insurance and risk modelling, economic capital, and the integration of risk management into decision-making.

The BRCC specialists' skills enable the effective oversight of the quality, integrity and reliability of the Group's risk, capital, and compliance management. A current key focus area of this committee is the development and embedding of the climate risk framework, and ensuring consistent application across the Group, with respect to the management assessment and reporting of climate-related risk.

The Investment Committee members specialists' skills encompass research and innovation, data analysis, corporate leadership, coordination, and communication skills to tackle climate change. This is complemented by actuarial and management experience in financial services, with a focus on long-term investment and risk modelling, asset management, and the integration of risk management into decision-making. Most of the members also completed the PRI African Asset Owners Climate Awareness course in 2021.

Strategy

DEVELOPING OUR CLIMATE CHANGE STRATEGY USING SCENARIO ANALYSIS

TCFD, and other climate disclosures, recommend the use of different climate futures (scenarios) as a means of identifying potential risks and opportunities to business strategy.

Climate-related scenario analysis help us to assess the potential business implications of climate change. It guides strategic and risk management decisions for uncertain future physical climate conditions, and the business risks and opportunities likely to be associated with those scenarios.

In the 2022 TCFD Status Report the 226 companies surveyed who disclose in line with TCFD, lists doing scenario analysis, including selecting scenarios and developing relevant inputs and parameters as their top-challenge. In 2021 when we started our TCFD journey we developed bespoke scenarios, but our work has matured to use the framework of the NGFS. We acknowledge the importance of the TCFD principle of consistency but amended our approach to leverage the benefit of an established framework.

Climate scenarios abound in terms of their underlying information, economic sectors, and geographies. The NGFS[2] , a Group of central banks and academic advisors, have provided a common reference framework for financial institutions to analyse key physical and transition risks and opportunities, including the economic impact of climate change.

We adopted two future climate-change scenarios and evaluated the impact they could have on our Life Insurance, Non-Life insurance and Investments businesses – both from a physical climate (weather-related events and trends) and a transitional (transition to a low-carbon economy) perspective. We will, in time, build out our analysis to include at least one other climate scenario.

We identified physical climate risks and opportunities using a selection of climate models provided by institutions such as the Intergovernmental Panel on Climate Change (IPCC), the South African Council for Scientific and Industrial Research (CSIR), climate research NGO Climate Analytics, the South African Weather Service (SAWS) and The World Bank.

In assessing transition risk and opportunity, output from the NGFS, numerous relevant papers and findings, and the National Business Initiative (NBI), were used because they collate extensive and diversified research at both global and local level. These sources were further supplemented by relevant findings from the PCC and its work on the role of businesses in achieving a Just Transition for South Africa. We also used our own proprietary research and forecasting of socio-economic and political trends.

A special Climate Risk Steering Committee was formed to facilitate the process. External climate consultants were also used to give guidance on climate trends and how these should be reported in alignment with TCFD reporting requirements.

[2] The NGFS has been supported by the Potsdam Institute for Climate Impact Research, International Institute for Applied Systems Analysis, University of Maryland, Climate Analytics, and the Swiss Federal Institute of Technology.

Our use of climate change scenarios in understanding risk and opportunity

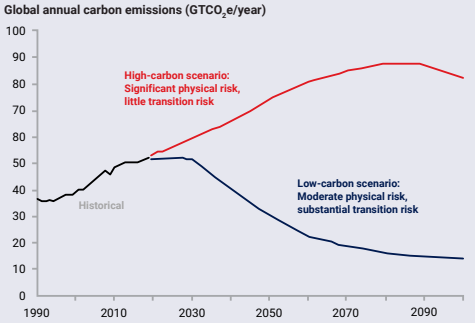
In our developing climate change considerations, we have adopted the use of two climate scenarios: a "Net Zero 2050" and "Current Policies" scenario.

To help companies deal with climate change uncertainty, climate scenarios reflect differing levels of global GHG emissions and their possible physical and transitional consequences.

By speedily reducing GHG emissions the worst impacts of physical climate change can be averted, but higher levels of transitional risk (and opportunity) will likely be experienced. This is because policy, regulatory, economic, and infrastructural change will be needed in a short space of time.

Conversely, unchecked growth in GHG emissions will ultimately result in increased physical climate events such as increased temperatures, heatwaves, droughts, and increased severity and frequency of extreme rainfall events. Under such scenarios, transitional impacts will be less severe.

Two possible future scenarios for greenhouse gas emissions



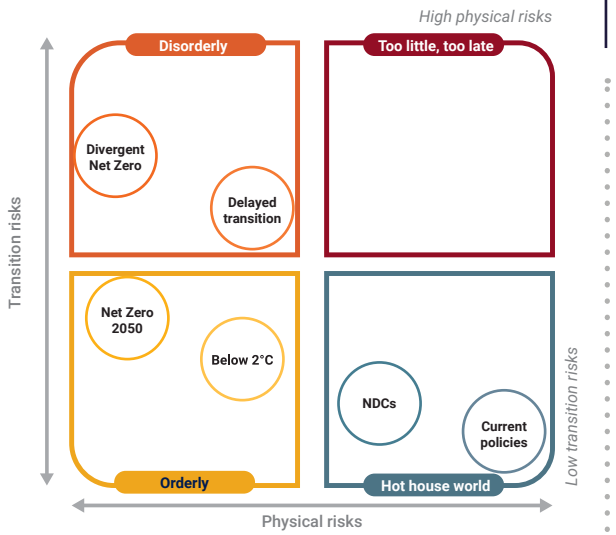
Note: Historical data, 1990 to 2019, and baseline and optimistic future scenarios
SOURCE: Climate Action Tracker

Strategy continued

Network for Greening the Financial System Climate Scenarios

The NGFS framework illustrates four broad scenario categories in which the following sub-scenarios are described:

- an "orderly transition" to net-zero emissions by 2050 in which climate policies are introduced early and are gradually made more stringent, with a high probability of limiting global warming to 1.5°C by the end of the century (in alignment with the objectives of the Paris Agreement)
- a "disorderly transition" in which climate policies are introduced late (post 2030) but with the same goal of avoiding warming beyond 1.5°C
- a "hothouse world" in which emissions are consistent with current commitments made by countries and NDCs[3]. According to Climate Action Tracker[4], this will result in global warming of 1.7°C -3.6°C, with 2.7°C and 2.1°C respectively being the most likely outcomes under current policies and, if all NDC commitments and pledges are met
- a "too little too late" scenario in which no, or very limited, policy is introduced to curtail GHG emissions. Global warming exceeds 4°C and run-away physical impacts are experienced



Source: NGFS, 2021

Using the NGFS framework, we chose two contrasting scenarios with sufficiently different climate change outcomes. These provide meaningful insight into the range of risks and opportunities that climate change might present to our Life, Non-life, and Investments businesses.

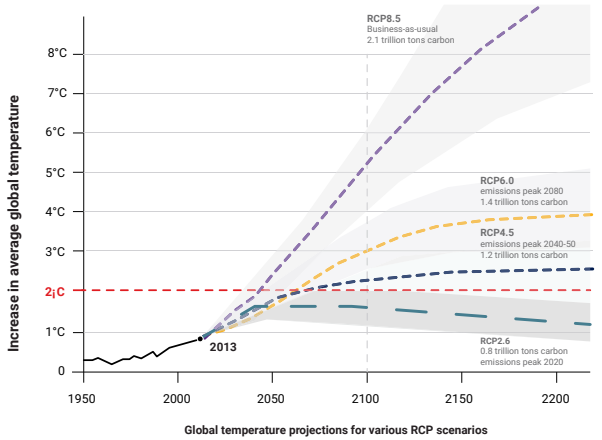
The Net Zero 2050 under an Orderly Transition aligns most closely with the ambitions of the Paris Agreement to limit temperature increases to 1.5°C above pre-industrial levels. Under this scenario, steps are immediately taken to halve GHG emissions by 2030 and reach net-zero emissions by 2050. Despite being optimistic, this scenario aligns with the TCFD recommendation to include at least one scenario that results in warming below 2°C, and that will entail significant levels of transition risk and opportunity.

Under Current Policies, the ambitions of the Paris Agreement are not met. The increase in global temperatures could range from 2°C-3.6°C, with 2.7 °C being the median. Despite current GHG reduction policies being implemented, GHG emissions continue with significant physical climate change impacts due to rising temperatures. We chose this as our second scenario as it is distinctly different from the Net Zero 2050 scenario. It also aligns with current international GHG reduction targets and country commitments. Under this scenario where the policy environment is known, there are certain transitional impacts, but the physical risks and opportunities are materially higher than in the Net Zero 2050 scenario. Many countries have updated their GHG reduction commitments under their NDCs, but their policies on how to achieve these commitments must still be presented. This creates uncertainty of whether the stated reduction objectives will be met.

[3] *Under the 2015 Paris Agreement, all signatory parties committed to communicate on a regular basis their Nationally Determined Contributions (NDCs) which outline their national greenhouse gas reduction targets and timeframes.*
[4] *Climate Action Tracker (CAT), a collaboration between Climate Analytics and the New Climate Institute evaluates climate change mitigation targets and policies such as the NDC's and aggregates country action to the global level, determining likely temperature increases in the 21st century. CAT is funded by the European Climate Foundation and the German Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) via the International Climate Initiative.*
[5] *Radiative forcing is a measure of the energy imbalance of the earth's atmosphere. A positive value indicates more energy entering or being held in the atmosphere instead of being radiated into space. This net gain of energy will cause warming.*

Physical climate change depicted by Representative Concentrated Pathways

We correlated the two chosen scenarios outlined above against the GHG concentration projections adopted by the IPCC, known as Representative Concentrated Pathways (RCP). These describe different climate futures, depending on the volume of GHGs emitted in the future. They are named after possible ranges of radiative forcing values[5] by the end of the century relative to pre-industrial values. These RCPs have been used by various scientific bodies to build climate-related global circulation models to estimate future physical climate change impacts across the globe.



Source: Architecture 2030: Adapted from IPCC Fifth Assessment Report 2013
Representative Concentration Pathways (RCP), temperature projections for SRES scenarios and the RCPs.

As illustrated above, RCP2.6 is modelled on immediate GHG reductions and is described by the IPCC as "likely" to result in warming below 2°C by the end of the century. This RCP is most aligned to Net Zero 2050 and we can access reliable climate models for this pathway at a South African level under our selected timeframes.

To understand the physical impacts of the Current Policies scenario we have looked at both the RCP4.5 and RCP6 as, collectively, these emission pathways cover both the emissions trajectories and the projected range in temperature that the Current Policies scenario could result in. RCP4.5 requires GHG emissions to peak around 2040 and then decline thereafter, with an end of century average global warming of 1.1°C -2.6°C. Although not as extensively modelled, RCP6 reflects a slower increase but emissions peak later with greater overall levels of GHG emissions by the end of the century. This extends the maximum global average temperature range to a possible 3.1°C according to the IPCC.

Using climate models from the IPCC, World Bank, SAWS, Climate Analytics and the South African CSIR, it is possible to determine different physical impacts associated with these two pathways across South Africa – including average temperature change, precipitation, drought, and sea-level rise. These projections cover near-term (present-2035) and medium-term (2035-2060) timeframes as defined in a climate modelling context.

Strategy continued

Climate change timeframes

Near-term: Present to 2035 → **Medium-term:** 2035-2060

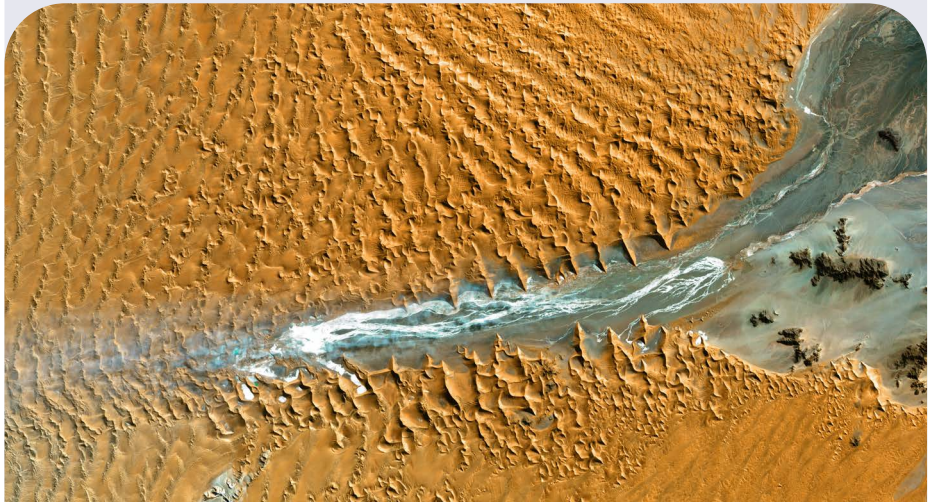
Climate change is associated with uncertainties including how much climate change will take place over what time period. An integral aspect of scenario analysis is the timeframes chosen to distinguish observable physical climate change.

Physical climate models typically present projected impacts over near-, medium- and long-term timeframes. Those climate models that cover South Africa, and on which we have relied, present information for the near-term, being from the present to 2035; and the medium term, from 2035-2060. Together these two timeframes show suitably distinguishable periods of future physical climate impact and allows us to consider the increasing severity of climate-related risks and opportunities that might arise over time.

We acknowledge evidence that recent global and local weather events can be attributed, to some degree, to climate change. However, the length of a near-term timeframe up to 2035 provides us with greater assuredness of physical trends to identify climate-related risk and opportunity in our insurance and investment businesses and to adjust our various business strategies accordingly.

A medium-term outlook from 2035-2060 allows us to understand longer-term climate change patterns. We believe that the use of any long-term timeframes (i.e., being beyond 2060 and up to 2100) is too long a period to be meaningful for climate forecasting and developing a relevant and responsive business strategy.

The nature of climate change, however, demands that we constantly evaluate the reliability of climate models used in our scenario analysis. As an insurer and an investor, we need to continuously consider the relevance of climate model timeframes, and the confidence with which we can analyse climate-related risks and opportunities on the information provided within those timeframes.



Climate risk types

In identifying climate-related risks, we are guided by the recommendations of the TCFD that distinguish between physical climate risks relating to weather events and trends, and transition risks referring to policy, technological, market and reputational impacts that might be experienced on the energy transition to a low-carbon economy.

Physical climate risks	
Acute risk	Risk from one-off severe physical events, for example, floods; drought and hailstorms.
Chronic risk	Risk from changing climate patterns, for example, continued warming, increased average annual rainfall and increased frequency and severity of extreme rainfall events.

Transition climate risks	
Policy and regulatory	Risk from changing climate policy, including international and national GHG reduction targets; energy efficiency regulations and carbon taxation.
Technology	Risk associated with technology developments – both in not adopting new technologies and, also, supporting new but quickly redundant technologies.
Market	Risks associated with change in market share; consumer behaviour choice; new products and services; carbon trade barriers.
Reputation	Reputational damage from non-alignment with the climate response required at global, national, or sectoral level.

Climate change implications under Net Zero 2050 and Current Policy scenarios

High levels of transition risk can be expected under the Net Zero 2050 orderly scenario, while significantly higher levels of physical risk will be experienced under the Current Policies scenario.

Our Climate Risk Steering Committee used available scientific data and socio-economic and political information to identify transition and physical risks to our Life, Non-life, and Investment businesses. A summarised view of these risks can be found in the appendix.

The Committee has done a qualitative assessment based on the scenarios and considered the impact of the identified risks on our Non-life, Life, and Investment business. It is indicative, rather than definitive, and allows for estimations of potential impact. It will also continue to change over time as new policies are introduced, technologies are adopted, and the scientific understanding of physical climate change continues to improve. Further integration of the outcome of the analysis with the Group ORSA process will strengthen our climate risk approach (See page 18 on how the analysis and the work we have planned, integrates into the ORSA).

Strategy continued

TRANSITION RISKS*

Non-Life | **Life** | **Investments**

Policy and Legal

The pace of policy introduction will determine which industries and sectors will be impacted when, and how. Policy changes under Net Zero 2050 could trigger higher unemployment in sectors deemed as negative contributors to the green agenda. Investor support could be lost for failure to deliver on increased disclosure and regulatory reporting requirements. Under Current Policies the risk of litigation is deemed less likely, but South Africa will have to consider counterparts affected by laws in other jurisdictions.

Technology

There could be a reduction in commercial insurance and underwriting opportunities for carbon intensive and related industries under the Net Zero scenario. The risk for underinvestment in new technologies for the transition exists, with energy security consequences for the economy. There is the risk of supporting the wrong emerging energy technologies. Transition-technologies might be more expensive resulting in higher claims, where they are underwritten. The changing technological requirements for companies could impact their profitability and valuations. Under the Current Policies scenario this impact will be limited, although there could be reputational and financial loss for not adopting or supporting new technologies.

Market

Reduced economic output and job losses under both scenarios could impact the affordability of our products. Job losses in some sectors could lead to civil unrest and damage to assets, impacting claims. Under the Net Zero scenario abrupt and unexpected shifts in energy costs could occur. Repricing of assets such as fossil fuel reserves, land valuations and securities valuation could occur. Pressure to invest in illiquid long-term green infrastructure investments could cause losses from corporate debt investments. Under the Current Policies scenario there could be increased production costs due to changing input prices for utilities such as energy and water, and the output requirements thereof.

Reputation

Under the Net Zero scenario a failure to deliver on emission reductions could lead to reputation impacts in addition to investor pressure. An inability to adapt insurance products or distribution channels may lead to longer term reputational risks and impact business volumes. There could also be public or government pressure to broaden policy terms and pay claims that are not strictly in coverage terms. Negative reputational impacts from the decision to underwrite (or not underwrite) or invest in carbon-intensive projects or properties exposed to high physical risk could occur. Consumer perception and reputational status could be affected despite a lack of transition-positive policies.

PHYSICAL RISKS

	RISK	Net Zero 2050	Current Policies	Non-Life	Net Zero 2050	Current Policies	Life Insurance
		Impact rating			Impact rating		
ACUTE RISKS	Increase in very hot days and heatwaves	Low	Med	Higher temperature could increase the risk of fires, potentially increasing catastrophe events impacting reinsurance. Adapting the operational business model might be required in extreme cases to accommodate the impact on our employees.	Low	Low	Increased heat stroke and exhaustion could lead to hospitalisation and in very extreme cases disability events. There could be a potential impact on persons with cardiovascular disease.
ACUTE RISKS	Increase incidence of severe drought	Low-Med Longer term	Med – High Longer term	Drought will result in water scarcity and could exacerbate the increase in fire-related claims. Water restrictions can lead to job losses and civil unrest which could negatively impact claims frequency and severity. The affordability of insurance products could be impacted.	Low	Med	The quality and availability of food might be affected. Food price increases would reduce household income and could increase cancellations of insurance products.
ACUTE RISKS	Increase in flood events	Med	High	Flooding results in a high severity and frequency claims due to extreme damage to vehicles and property. The probability of catastrophe events occurring is also high which would impact the cost and availability of reinsurance in future. Key economic infrastructure could be disrupted or destroyed, affecting supply chains.	Low	Low	This could lead to additional deaths and disabilities, especially where there is concentration in low lying areas.
CHRONIC RISKS	Increase in average temperature	Low	Med	Higher temperatures could increase the risk of fires which could result in more claims. These could potentially result in an increase in catastrophe events which will have an impact on reinsurance availability and cost.	Low	Low	This could impact the health of the exposed population. The event could result in heat stroke, exhaustion, hospitalisation and in extreme cases, disability events.
CHRONIC RISKS	Change in rainfall patterns	Med	High	This could lead to concentrations of exposure that could cause notable claims. Flooding results in high severity and frequency claims due to extreme damage to vehicles and property. The probability of catastrophe events occurring is also high which would impact the cost and availability of reinsurance in future.	Low	Med	Considering the two dimensions to rainfall – less and more – which simplistically could lead to different events (droughts and floods) the impact is assessed to be limited under Net Zero 2050, but potential aggregations lead to moderate impact under Current Policies.

**The transition risks present the view at Group level, although the impact of transition risks will be more relevant for our investment business.*

Strategy continued

Identified climate change opportunities

Climate change can, and will, present business and strategic opportunities to different areas of our businesses

In addition to risks, climate change undoubtedly provides the insurance and investment sectors with various opportunities. Some of these have already presented themselves, while others will still materialise. For instance, the IPCC, states that 46% of the technologies needed for the world to achieve the 1.5°C warming target must still be developed.

The TCFD recommends certain opportunity types that organisations should be considering in their response to climate change. While many of these are relevant to our businesses, our focus has so far primarily been on understanding climate risk. We have further work to do to identify business opportunities that can assist South Africa in its climate resilience efforts and transition to a low-carbon economy.

Below are some of the early opportunities that we have identified, which we still need to financially quantify, and some of the opportunities Momentum Metropolitan is already pursuing. Read more in the 2022 Sustainability Report from page 26.

Climate-related opportunities

TCFD opportunity type	Description	Examples of MMH response
Resource efficiency	• Reduced operating costs due to resource efficiency gains • Increased value of fixed assets such as green buildings	• Recycling programmes reducing waste to landfill and associated costs • Green Building Council South Africa 5-star green buildings and energy performance certificates • Energy efficiency technologies including for our data centers • Water efficiency measures, water plants and a borehole (Cape Town campus) to manage resource restrictions and operational resilience
Energy source	• Use of lower-emission sources of energy • Use of new technologies • Shift toward decentralised energy generation	• Photo voltaic installation measures in our property portfolio • Efforts towards energy security and resilience against loadshedding • Alternative investments in renewable energy and other environmentally positive projects
Products and services	• Development and expansion of low-emission goods and services • Development of climate adaptation and insurance risk solutions • Ability to diversify business activities	• ESG investment funds • Sustainable Linked Loans supporting climate performance and clean energy • Solutions for the agricultural sector to protect farmers against volatile climatic conditions
Markets	• Access to new markets • Access to new assets and locations needing insurance coverage	• Supporting renewable energy construction and infrastructure sectors – contractors, sub-contractors, and suppliers – with loan guarantees

Image: Umoya

Strategy continued

RESPONSIBLE INVESTMENT APPROACH TO CLIMATE CHANGE

Our **Climate Change Investment Policy** acknowledges the pressing need to transition to a low-carbon economy while balancing the socio-economic needs of a Just Transition and ensuring that its overall impact is not detrimental to society.

Apart from not investing in any new thermal coal projects, our investment approach is not exclusionary. Rather, we have adopted a stewardship approach in which we engage directly with investees who are deemed heavy carbon emitters and have signed the PRI-led international statement of investor commitment to support a Just Transition on climate change. We are also signatories to the Climate Action 100+ initiative. Our Head of Fixed Income sits on its Sasol working group, and Senior ESG Analyst on its Eskom working group.

To further understand the implications of climate change for our equity portfolios, we are in the process of commissioning an international investment ESG research company to enable us to do carbon exposure analysis of all our holdings. We will use this information to further engage our investees on their climate change risks and impacts.

Annual assessment of investment managers

We assess and encourage the investment managers of South Africa to publish their climate change investment policies and adopt TCFD recommendations.

- **56%** We recognise climate change risk as an important consideration in our risk framework
- **16%** We recognise climate change risk in our responsible investment policy
- **14%** Our climate change policy also recognises a Just Transition and is published on our website
- **9%** Our climate change investment policy also recognises a Just transition
- **5%** We don't recognise climate change risk as an consideration

- **55%** We are considering and investigating the TCFD recommendations
- **22%** We fully support the TFCD recommendations
- **14%** We engage and encourage our companies to report according to the TCFD recommendations
- **5%** No we do not support the TCFD recommendations
- **4%** We have published our own TCFD report

We have assessed if climate-related risks were acknowledged and evident in the respective investment managers' policies. Information on how to write a climate- change investment policy and information on TCFD recommendations were shared as we want our appointed investment managers to be aligned to our investment approach.

The total universe assessed for the calendar year 2021, were 56 investment managers in South Africa.

As investors, it is also in our interest to encourage companies in which we invest to increase their awareness of climate matters and to ensure that they also have a climate focus for a sustainable and resilient future business. It is necessary to drive such considerations also through policy adoption and to assign proper oversight functions to ensure successful implementation.

We also recognise that as investors we can develop products that facilitate both a transition to a low-carbon economy and support companies and projects that are carrying out their operations in a climate-responsible fashion. We currently offer three ESG investment funds with a climate focus. The Momentum Global Sustainable Equity Fund invests in companies that, among other environmental measures, have 22% less GHG emissions than the fund's benchmark. The Momentum Africa Real Estate Fund has won numerous awards for energy efficiency in its property assets while the Harmony Sustainable Growth Multi-Asset Fund holds zero exposure to coal and has oil and gas exposure that is 60% underweight compared to its peers.

Our Empowerment Financing division has invested R2.3 billion in renewable energy projects to date, with a further R3.9 billion due to be invested before the end of the 2022 calendar year. Collectively, these projects will result in the reduction of 4.8 million tonnes of CO_2 emissions.

Through Eris – our property development, investment, and services group – we have entered into a joint venture with a renewable energy company to develop eight solar photovoltaic (PV) projects at various retail properties and aim to expand to 14 projects by 2030.

We have developed a proprietary SDG impact framework, committed to by our investment teams, in which we set targets and track our investment performance against six SDGs[6]. Against SDG 7: Affordable and Clean Energy and SDG 13: Climate Action, we track the following metrics:

- Investment value in clean energy sources
- Number of solar PV sites funded
- Percentage of appointed third party investment managers with climate change policies
- Percentage of private market General Partners with climate change strategies
- Percentage of green-rated buildings in the listed property portfolio
- Percentage of heavy emitting companies that publish TCFD reports

Moving our climate strategy forward

We recognise that the challenges of climate change will continue to evolve and that we are only starting our process to fully understand the impact that it will have on our businesses, our suppliers, and our customers. While we have made progress in the past year, we will increase our efforts to integrate climate change awareness into all aspects of our business. We will strengthen ownership and accountability for climate change and broaden our scenario analysis work. We will continue to identify top-priority climate risks and opportunities; further refine stress testing our business resilience in response to these risks and opportunities; and interrogate the financial impacts that they could have on our businesses.

[6] The six SDGs tracked by our investment impact framework are SDG 3: Good Health and Well-being; SDG 4: Quality Education; SDG 7: Affordable and Clean Energy; SDG 8: Decent Work and Economic Growth; SDG 9: Industry, Innovation, and Infrastructure; SDG 13: Climate Action.

Risk Management

How we identify, assess, and manage climate-related risks

Climate change management at Momentum Metropolitan leans on the Group ORSA processes for risk management.

Climate change poses significant risks to the nature of our businesses. As an insurer, our responsibility is to correctly price the risk that our customers face including climate change. We also have the responsibility to contribute to societal resilience. As an investor we must understand the risk and opportunity that climate change poses to our investment portfolios and ensure we continue to create value.

We have already experienced events that can be attributable to climate change, which have impacted our businesses from a strategic and financial perspective. In response, we are in the process of building more robust climate risk management processes at our individual business level and integrating these into our Group-wide ORSA risk management process with defined lines of reporting to our Board's BRCC and SETC.

How we identify and assess climate risk

The Group follows both a top-down and a bottom-up approach to identify and assess climate risk.

All our business units are tasked with the responsibility of identifying risk, including climate-related risks, to their businesses. Once an inherent risk is recognised it is reported by the business unit to the Group Risk Strategy Committee (Risk StratCo) comprising of the Chief Risk Officers of all our businesses. The Risk StratCo is mandated to evaluate climate-related risks and manage the Groupwide, or business unit specific, risk response.

To evaluate climate-related risks more effectively and comprehensively, the Risk StratCo developed a climate risk framework, and a focused Climate Risk SteerCo was established to conduct scenario analyses, which allows for the identification of relevant risks. Within the framework, identified physical and transitional climate risk types are assessed from a materiality perspective across different risk types in our risk taxonomy (for example, market, regulatory, longevity, mortality, morbidity, lapse, counterparty credit, operational, strategic, and business, non-life insurance and reputational) and, also, by considering the following factors:

- Potential claims
- Potential mismatch between value of assets underwritten and cost of replacement
- Shifts in geographic distribution of natural hazard and health risks
- Adequacy of reinsurance cover and pricing
- Technological investment for the low-carbon economic transition
- Affordability and adequacy of insurance cover
- Impact on the value of investments over the short and long-terms.

How we manage climate risk

Climate risk is managed according to the nature of the risk, exposure of affected business and the business risk appetite.

Once identified risks have been scored for severity and materiality aspects, they are monitored and managed as part of our ongoing risk evaluation activities. Each risk is assessed according to its nature and level of exposure relative to the Group's risk appetite and risk strategy. Management at each business unit seeks to consider and implement appropriate risk responses based on the agreed risk appetite. These response actions are implemented and managed at both business unit and at Group level.

The climate risks and opportunities of both the individual businesses, and the Group as a whole, are reported to the Board's Investment Committee, the SETC and the BRCC (see page 9 in the governance section for an overview of our climate governance).

How we integrate climate risk into our Group enterprise risk management processes

In 2022, climate change emerged as one of nine top risks to the Group as identified in the 2022 Integrated Report. These are risks that could hamper our ability to create value and deliver on our strategic objectives, as well as compromise long-term business viability.

The ORSA process requires that all material risks that may have an impact on our ability to meet our obligations to our various stakeholders be considered. This includes a quarterly assessment of our current and forward-looking risk profile.

The Group's risk classification is designed to best reflect risk exposures by risk taxonomy, that can be event driven, functional, a life cycle or regulatory classification approach. Each main risk category is supported by the appropriate policies, methodologies and frameworks designed to give insight to the application of the risk identification, assessment, monitoring, management, and reporting.

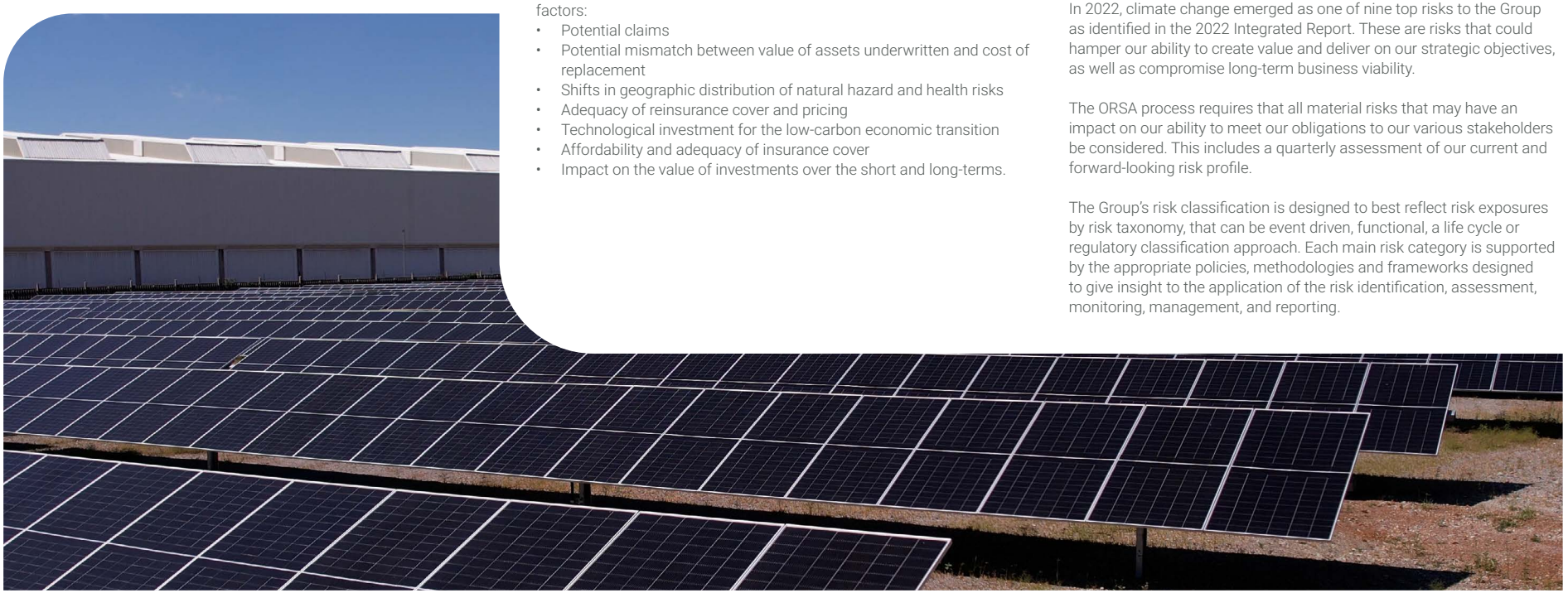


Image: Terra farm

[7] *We define an inherent risk as being a risk without any existing control measure in place.*

Risk Management continued

- The implementation of remedial action progresses
- Relevant climate change risk indicator results, risk exposure levels, outlook and management responses will be reported regularly to the relevant stakeholders at the various governance structures

Risk reporting

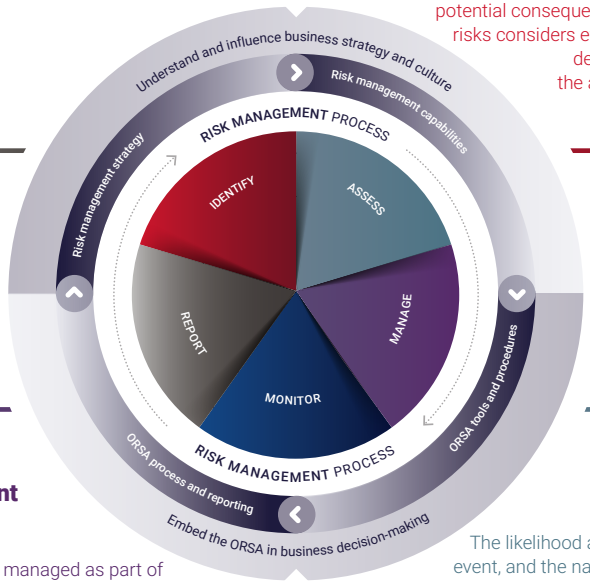
Risk reporting is provided regularly to the relevant stakeholders, and details the risk exposures, proposed responses to the risks

Risk identification

The risk identification process relies on appropriate mechanisms, at a risk-type level, to identify sources of risk as well as their potential consequences. The identification of risks considers events that might enhance, degrade, accelerate or delay the achievement of objectives

- Applicable climate related events (source events) were identified
- These considered tail events that would have a material impact from a financial and non-financial perspective

Climate change risk integration



Climate change risk integration

- Upon determining residual risk, the management remedial actions required to bring the residual risk to an acceptable level, will be identified, agreed and managed
- Climate change risks indicators will be monitored as part of our ongoing operations based on the agreed risk appetite

Risk management and monitoring

Risk is monitored and managed as part of our ongoing operations. Management seeks to consider and implement appropriate risk responses based on the agreed risk appetite

Risk assessment

The likelihood and consequence of a risk event, and the nature and level of exposure relative to the Group's risk appetite and risk strategy is assessed. Controls and management actions, their effectiveness and efficiency are considered for the residual risk exposure

- Inherent impact and likehood of source events were qualitatively assessed for the two selected scenarios (Net Zero 2050 and Current Policies) across the two time-horizons: 2022-2035 and 2035 - 2060
- This assessment was used to determine the materiality for other principal risk types
- Further work to be performed include the following:
  - Determining the level of exposure relative to the Group's risk appetite and risk strategy
  - Assessing the adequacy and effectiveness of controls to determine the residual risk exposure
  - Linking this process with scenario outcomes in the MMH ORSA process
  - Determining metrics and targets for key climate change risk indicators

The decision to leverage the existing risk management processes was a key design principle in the management of climate change. Instead of creating a separate risk type, climate risk is seen as integrated into each of the existing risk types in the risk taxonomy. In the assessment of the potential impacts of climate change risk it is assessed as either giving rise to additional risk within each risk type or affecting the likehood or severity of existing risks.

Metrics and Targets

Momentum Metropolitan has a low direct environmental impact because of the nature of our business, which includes or office and data infrastructure. However, we recognise that the responsible management of our impact on the environment is key for the sustainability of our business and a key consideration for our clients, employees, and broader society.

Our carbon footprint*

We are committed to tracking our climate performance, including how we manage risk and opportunities, and disclosing these transparently. We have been a voluntary CDP participant since 2013 and achieved a B-score since 2017. We report our GHG emissions through our annual carbon footprint, verified by an external carbon emissions agency. We report our Scope 1 and Scope 2 emissions in accordance with the GHG Protocol Standard and address selected Scope 3 categories. Our intention is to achieve full compliance with the GHG Scope 3 Standard over time, covering those categories that are applicable and relevant to Momentum Metropolitan. We acknowledge that our value chain emissions need to be further evaluated for effective carbon management and our metrics and targets will likely evolve over time as new insights are developed.

Our current target is to achieve a 25% reduction in our combined Scope 1 and 2 emissions by 2030, compared to a 2014 baseline. In the 2021 calendar year, we achieved a 27% reduction (2020: 26.20%) in our Scope 1 and 2 GHG emissions, thus exceeding our target. While we did not set a reduction target for our overall emissions (scope 1,2,3), we achieved a 34% decrease compared to 2014 by the end of 2021.

	1 January to 31 December 2021 (tCO_2e)	Baseline year 2014 (tCO_2e)	Change from 2014 to 2021
Scope 1			
Stationary fuels (generator diesel/ petrol)	**697**	71	877%
Product use: refrigerant gases (Kyoto Protocol)	**599**	381	57%
Mobile fuels (owned cars)	**427**	992	-57%
Total Scope 1 emissions	**1 722**	**1 444**	**19%**
Scope 2			
Purchased electricity – location-based	**42 027**	58 209	-28%
Total Scope 2 emissions	**42 027**	**58 209**	**-28%**
Scope 3			
Category 1: purchased goods and services – paper	**1 531**	901	70%
Category 1: purchased goods and services – water	**98**	212	-54%
Category 3: fuel and energy-related activities – transmission and distribution (T&D) losses	**4 962**	6 556	-24%
Category 3: fuel and energy-related activities – well-to-tank emissions (WTT) -fuel	**269**		
Category 5: waste generated in operations	**136**		
Category 6: business travel – flights	**1 096**	10 545	-90%
Category 6: business travel – car hire	**113**	269	-58%
Total Scope 3 emissions	**8 206**	**18 483**	**-56%**
Total Scopes 1 and 2	**43 749**	59 653	-27%
Total Scopes 1, 2 and 3	**51 955**	78 137	-34%
Total number of employees	**16 483**	17 422	-5%
Total emissions per employee **(tCO_2e/ FTE)	**2.65**	3.42	-22%

**All data reflects the 2021 calendar year to align to regulatory reporting timeframes. The GHG reporting boundary was based on operational control.*
*** The F2014 Intensity of 3.42 tCO_2e/FTE was recalculated and verified in April 2016. The full time equivalent (FTE) denominator value included all permanent office and field staff but excluded all temporary staff.*


Image: Karoshoek

Metrics and Targets continued

Performance for F2022

Our approach to climate change and overall environmental stewardship is set out in our Sustainability Framework pillar related to helping build the low-carbon economy. Our key support areas for this pillar include:

Greening our operations	Where we have operational control, we measure our environmental performance in terms of water, energy, and waste management. This includes any partnerships we've established to improve the reuse of company assets to reduce waste. We make energy efficiency a key consideration for any new buildings and aim to improve the energy efficiency of existing buildings and key infrastructure such as our data centres.
Investing in the green economy	This includes our responsible investment commitments which integrate environmental considerations into our investment decisions, investments in renewable energy and infrastructure projects to improve the delivery of basic services, for example water security. It also includes our enterprise supplier development investment for SMMEs and youth entrepreneurship programmes in the green economy.
Product offerings and innovations to support environmental performance	Includes products and services we develop to address emerging environmental risks. It also refers to efforts we have made to reduce emissions in our distribution channels (sales), customer acquisition and policy management phase, for example remote health assessments.

Greening our operations
Data based on 2021 calendar year

4 waste management programmes
(one at each main campus)

47% waste produced recycled
2020: 40%

106 727kl total water withdrawal
2020: 109 215 kl

45 082 MWh total energy consumption
2020: 48 050 MWh

The Marc (Sandton) rated five stars by the Green Building Council South Africa

**Eris Property Group (ERIS), is a subsidiary of Momentum Metropolitan and a fully integrated property development, investment, and services group*
***Managed by Momentum Global Investment Management (MGIM)*
****Agnovate is a multi-peril yield insurance product created to provide protection to our farming clients against events such as drought, which may be triggered by volatile climatic conditions. It covers all perils, except hail, that may result in a yield shortfall across a production area, even when these happen simultaneously.*

Investing in the green economy

R2.3 billion invested in renewable energy through empowerment financing
F2021: R2.1 billion

R2 million invested in GreenShoots Enterprise Supplier Development Programme to support black women-owned businesses in the green economy

9 839 tonnes of CO_2 avoided with the installation of eight solar projects at retail property sites by *Eris through the Momentum Direct Property Fund

GLOBAL FUNDS**

Momentum Global Sustainable Equity Fund measured by the RobecoSAM Smart ESG Score
Key performance indicators:
- **21.5%** lower GHG (Scope 1 and 2) than the benchmark
- **23.3%** lower waste generation than the benchmark
- **22.5%** lower water consumption than the benchmark

Harmony Sustainable Growth Multi-Asset Fund
Key performance indicators:
- No exposure to coal
- **60%** lower exposure to fossil fuel (oil and gas) than peers

MOMENTUM ALTERNATIVE ENERGY FUND

Supporting SDG7 - Affordable and Clean Energy
R96m invested in renewable energy projects Umoya and Karoshoek (F2021: R95m)
533 392 MWh generated per annum
147 200 houses powered
559 954 tCO_2e emissions saved

Product offerings and innovations to support environmental performance

R2 billion in renewable energy guarantees (solar)
F2021: R2 billion

R3.3 billion in renewable energy guarantees (wind)
F2021: R2.4 billion

R5.2 million gross written premiums for Agnovate***
multi-peril yield insurance
F2021: R2.8 million

Metrics and Targets continued

FOCUS: Our Green IT Strategy

Our data centers are not currently part of the emission calculation for our carbon footprint, but our IT teams have been working hard to increase their energy efficiency. The data is based on calendar year performance to align to audit and project cycles.

Green IT strategy

Objective: Enable greater resource efficiency and business benefit while improving overall responsible environmental practices

Sustainability drivers

Initiative

Power efficiency management

The Power Usage Effectiveness (PUE) at the main data centres (Centurion and Parc du Cap) has been improved. Upgrades in IT equipment resulted in an efficiency increase since the first measurement in 2018. We are actively moving towards increasing efficiencies with the current Data Centre Modernisation project.

Operational efficiencies

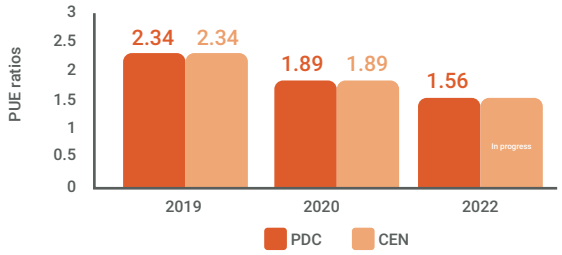
We aim to further reduce energy usage through ICT Kit power efficiency. This is achieved by having data centres migrate from power-intensive devices such as servers and storage to energy-efficient infrastructure solutions. New infrastructure migrations in Centurion are showing a large decrease in ICT device count while still growing the business. Converged infrastructure allows the increase of capacity while reducing energy, cooling, and our physical footprint. This impacts our Green IT disposal.

Green IT disposal

The Group disposes of up to five tonnes of e-waste per annum. This is driven by large-scale decommissions which result in an increase in Green IT disposal volumes. The Parc du Cap data centre has a dedicated Green IT disposal vault. The disposals are compliant with the Protection of Personal Information Act (POPIA) and have been in practice since 2018. In 2022, IT teams disposed of 16 tonnes of e-waste that avoided landfills.

Performance

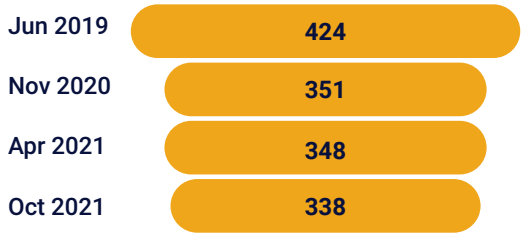
***PUE ratio of Momentum Metropolitan data centres**



Note: No major changes undertaken in 2021 that necessitated recalculation of PUE.

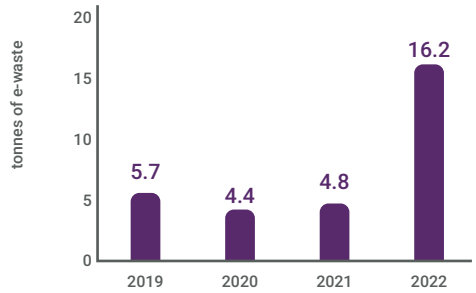
PUE	Level of efficiency
3.0	Very inefficient
2.5	Inefficient
2.0	Average
1.5	Efficient
1.2	Very efficient

Reduction of physical assets/servers



Note: Data up until completion of Group IT audit on 31 October 2022.

Data centre green disposal per annum



Future target setting

We recognise that the reduction in emissions over the 2020 and 2021 calendar years was aided by the COVID-19 pandemic and the hybrid way of work that was embedded following the lifting of pandemic restrictions.

The Group has made a commitment to set a new emissions reduction target in 2023 when we expect employee office occupancy to stabilise. The Momentum Metropolitan Executive Committee also mandated the Sustainability Forum to commence work in February 2023 to assess the resources that would be required for us to become net zero in our own operations and financed emissions. Net-zero journeys have unexpected challenges and new opportunities but are necessary if we want to maintain our position as a responsible corporate citizen and contribute to South Africa's transition to a low-carbon economy. A dedicated team will be established to begin this preliminary work. This will include setting targets for water and waste management.

** Power Usage Effectiveness (PUE) is a metric used to determine the energy efficiency of a data centre. PUE is determined by dividing the total amount of power entering a data centre by the power used to run the IT equipment within it.*

Appendices

Annexure A: List of abbreviations, acronyms and definitions

BRCC	Board, Risk, Capital, and Compliance Committee
CDP	A non-profit originally known as the Carbon Disclosure Project, now only referred to as CDP. It runs a global environmental disclosure system for investors, companies, cities, and governments to assess their impact and take action to build sustainable economies.
Climate Action 100+	An investor-led initiative to ensure the world's largest corporate greenhouse gas emitters take the necessary action on climate change.
COP27	COP or Conference of the Parties is the supreme decision-making body of the United Nations Framework Convention on Climate Change (UNFCCC). It meets annually to decide on the global steps against climate change. The 27th COP was held in Egypt in 2022. The UNFCCC, is an environmental treaty that nations joined in 1992.
CRISA	Code for Responsible Investing in South Africa
CSIR	South African Council for Scientific and Industrial Research
ESG	Environmental, Social and Governance
GBCSA	Green Building Council South Africa
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change. First set up in 1988 it surveys the research on climate change happening all around the world and reports on the current state of our scientific knowledge through assessment reports.
MGIM	Momentum Global Investment Management
Mitigation and Adaptation	Mitigation refers to an action that will reduce or prevent GHG emissions such as using renewable wind and solar energies. Adaptation refers to actions that help us cope with the effects of climate change such as projects to improve the resilience of infrastructure during extreme weather events.
NBI	National Business Initiative
NDC	Nationally Determined Contributions are commitments that each country makes to reduce emissions and adapt to the impacts of climate change. Countries submitted their NDCs in 2020 and will do so every five years.
NGFS	The Network for Greening the Financial System is a network of 114 central banks and financial supervisors that aim to accelerate the scaling up of green finance and develop recommendations for central banks' role in climate action.
NOAA	National Oceanic and Atmospheric Association
NPC	National Planning Commission
ORSA	Own Risk and Solvency Assessment
Paris Agreement	A legally binding international treaty on climate change. It was adopted by 196 nations (also called parties to the treaty), including South Africa, in December 2015 at COP21 in Paris.
PCC	Presidential Climate Commission
POPIA	Protection of Personal Information Act
PRI	Principles for Responsible Investment
PUE	Power Usage Effectiveness
PV	Photovoltaic
RCP	Representative Concentrated Pathway. A greenhouse gas concentration trajectory adopted by the IPCC. There are different RCPs, each describing a climate future based on a set of assumptions regarding economic activity.

Appendices continued

SAWS	South African Weather Service
SDGs	Sustainable Development Goals. A collection of 17 interlinked global goals designed to be a blueprint to achieve a better and more sustainable future for all. The SDGs were set up in 2015 by the United Nations General Assembly and are intended to be achieved by the year 2030.
SETC	Social, Ethics and Transformation Committee
SteerCo	Steering Committee
StratCo	Strategy Committee
TCFD	Task Force on Climate-Related Financial Disclosures
tCO_2e	Tonnes of carbon dioxide equivalent
WEF	World Economic Forum
WWF	World Wide Fund for Nature

Image: Karoshoek

Appendices continued

Annexure B: Summary of climate risk indicators identified by our Life, Non-life, and Investment businesses

Transition risk implications for the Net Zero 2050 and Current Policies scenarios

Risk Type	Potential consequences	Scenario		Sources
		Net Zero 2050 (orderly)	Current Policies	
Policy and Legal	Policies relating to international and national carbon reduction targets (net zero 2050 and NDCs). South Africa commits to reducing emissions in 2030 to between 350-420 megatonnes of CO_2e per year (currently stated).	• The rapid move to low-carbon energy production leads to the stranding of assets, capital, and labour • Emission reductions are also needed outside of the energy sector. Parts of the economy will not be able to convert at the required pace or will be non-competitive.	• No explicit mitigation except for some energy policy work currently underway. • The national energy model is optimised to find the lowest cost path for meeting energy demands in the economy. • A slower move to a lower carbon energy model will positively affect the value of high carbon.	Marquard et al
	Changes in the South African carbon tax regime.	• Significantly increased tax costs after 2025. • Increase in cost to customers.	• Carbon tax to be aligned with current Treasury intentions.	IPCC, PCC
Technology	Change in primary energy sources from fossil fuels to renewables.	• Majority of the of the power generation comes from solar photovoltaic (PV) and wind.	• Higher levels of solar PV and wind as part of power generation than present.	Mervy et al, IPCC
	Global investment required in energy efficiency, green electricity and storage, carbon capture and storage.	• Potential underinvestment in required new and emerging technologies needed for the transition. • Excessive cost to the economy.	• Under investment in required new and emerging technologies needed for the transition.	
Market	Insufficient foreign investment to facilitate SA transition.	• High levels of foreign investment are needed in power generation up to 2050 to meet the demand.	• Lower levels of foreign investment needed in power generation up to 2050 to meet demand.	Hartley et al, Allianz, NGFS
	Climate impacts on global and national GDP.	• Medium-term - Global GDP lower than a world without climate change. • SA Real GDP is lower than under the Current Policies scenario.	• Medium-term - Global GDP significantly lower than a world without climate change.	
	Penalties by export trading partners on high-carbon goods.	• Limited reduction in economic output and job losses.	• Overall lower economic output and potential job losses.	
Reputation	Pressure from stakeholders.	• Increasing pressure from stakeholders to decarbonise operations, products, and investment portfolio. • Products and services could be perceived as non-aligned with required climate action.	• Limited pressure from stakeholders to decarbonise	TCFD
	Need for stringent GHG reduction targets.	• Targets to be science-based and include investment portfolio. • Failure to meet targets could result in reputational damage and more expensive access to capital.	• Limited pressure from stakeholders to decarbonise.	

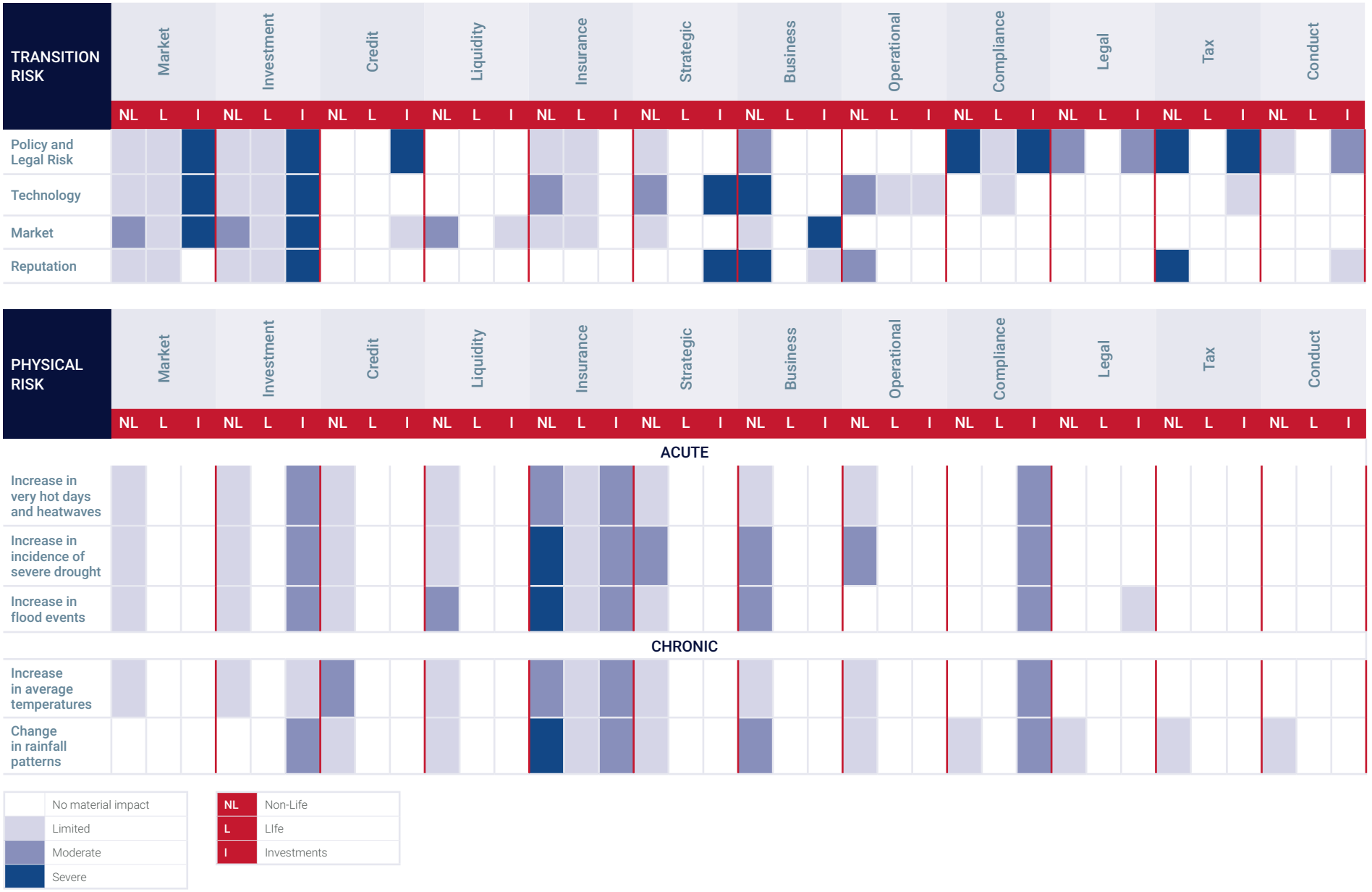
Appendices continued

Physical risk implications for the Net Zero 2050 and Current Policies scenarios

Physical Indicator		Short-term Time Horizon (present-2035)		Medium-term Time Horizon (2040-2060)		Sources
		Net Zero 2050	Current Policies	Net Zero 2050	Current Policies	
Average temperature increase		• Average warming along coastal regions of less than 1°C. • Interior average warming of less than 1.5°C.	• Average warming along coastal regions up to 1°C. • Up to 2°C average warming in interior and northern regions.	• Average warming along coastal regions of less than 1°C. • Interior average warming of no more than 1.5°C.	• Coastal regions up to 1.31°C of average warming. • More intense warming in the interior. Up to 2.8°C average warming in certain northern regions.	**CSIR, Climate Analytics World Bank**
Increase in "Very Hot Days" (VHD) (above 35 °C)		• Northern regions of South Africa most severely affected.	• Up to additional 50 VHD/year across most of South Africa. • +50 VHD/year in Northern Cape and northern Limpopo.	Information not available yet.	Information not available yet.	**CSIR World Bank**
Increase in heatwaves		Information not available yet.	• Increase in heatwaves across the whole country. • Highest area of impact is the Western Cape.	Information not available yet.	• Significant increase in number of heatwaves across the whole country. • Highest area of impact is the Western Cape.	**Mbokodo et al World Bank**
Likelihood of severe drought (in respective time horizons)		• Increased likelihood in Western Cape, Southern Cape, Eastern Cape interior, Free State and Northwest.	• Increased likelihood in Western Cape, Southern Cape, Eastern Cape interior, Free State and Northwest	• Significantly increased likelihood in Free State, Eastern Cape interior, Southwest Cape and Cape interior.	• Significantly increased likelihood in Limpopo, Southern Cape, Southwest Cape and western coast.	**World Bank**
Changes in rainfall	**Decrease**	• Decrease in Western Cape, western coast and western interior.	• Information not available yet.	• Material decreases in Southwest Cape • Continued drying in western interior.	• Western Cape interior experiences the most significant decrease.	**Climate Analytics CSIR World Bank**
	Increase	• Increase in eastern interior.	• Material increases in Central and Northern Free State; Gauteng; and KwaZulu-Natal coast.	• Increase in north and eastern regions	• Increase in Northern Free State, Gauteng and parts of Limpopo and Mpumalanga. • Significant increase in parts of Eastern Cape interior.	
Extreme rainfall events (minimum of 20mm of rain occurring within 24hours over an area of 64km^2)		Information not available yet.	• Increase in extreme rainfall events along KwaZulu-Natal and Eastern Cape coast.	Information not available yet.	• Southwest Cape experiences decrease in extreme rainfall events • Continued increase in extreme rainfall events along KwaZulu-Natal and Eastern Cape coast.	**CSIR World Bank**
Sea-level rise		• <0.1m by 2100	• <0.1m by 2100	• <0.1m by 2100	• Up to 0.1m by 2100	**NASA, IPCC**

Appendices continued

Annexure C: Overview of materiality of climate change on principal risk types



Appendices continued

ANNEXURE D: Reference list

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