


Perspectives on Advancing an Inclusive and Sustainable Green Economy in South Africa



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& the environment**
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The Third PAGE Ministerial Conference took place in January 2019 in South Africa. This publication arises as an action after the Conference, drawing on the four thematic concept notes produced for the Conference. The PAGE partners are the United Nations Environment Programme, the International Labour Organisation, United Nations Development Programme, United Nations Industrial Development Organisation and United Nations Institute for Training and Research. South Africa is one of the PAGE partner countries.

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Executive Summary

Introduction

Human-induced or anthropogenic impacts on Earth's ecological systems have pushed four of the nine planetary boundaries (climate change; biosphere integrity; land-system change; and biogeochemical flows) beyond their safe limits, resulting in environmental crises in terms of biodiversity loss, ecosystem degradation, and climate change. These environmental crises have significant impacts on human health and well-being, society, and the economy.

Climate disasters can damage or destroy productive capital and the supporting infrastructure, resulting in reduced economic growth, job losses, and poverty traps. It is estimated that climate change impacts cost the global economy US\$650 billion (R9.75 trillion) over just three years (2016–2018) and could increase to US\$54 trillion (R810 trillion) by 2040 (DiChristopher, 2019). Diseases like COVID-19 also have a direct link to continued unsustainable anthropogenic pressures on natural ecosystems and biodiversity, such as deforestation, urban expansion, intensive livestock farming, and wildlife trade.

The South African economy continues to face the triple challenge of high unemployment, poverty, and inequality, further exacerbated by the COVID-19 Pandemic. The country is also one of the most carbon-intensive economies in the world. Coal-based electricity generation, carbon-intensive transport systems, and energy-intensive industries continue to drive unsustainable greenhouse gas (GHG) emissions, with limited socio-economic benefits or progress against the triple challenge.

Transitional Risks

While South Africa disproportionately contributes to climate change, it is also vulnerable to both the biophysical impacts of climate change and the various socio-economic impacts from international and local responses to climate change, referred to as transitional risks. The frequency and intensity of extreme weather events, such as floods, fires, and droughts, to which

South Africa and the economy are highly vulnerable, are predicted to be on the rise due to an increase in global temperatures emanating from heightened anthropogenic activities. The extended drought between 2015 and 2018 had significant impacts on the economy – reduced maize exports alone, cost South Africa an estimated R12 billion in export revenue, with job losses across different sectors of the economy, from agriculture to tourism. The City of Cape Town almost depleted its potable water supply – referred to as 'Day Zero' (Arp, 2020).

South Africa faces several transitional risks, such as carbon trade barriers that threaten the economy's comparative advantage and international competitiveness; missed funding opportunities; job losses; and increased inequality and poverty. Jobs and livelihoods that rely on carbon-intensive sectors are also at risk and need to be carefully managed through a just transition to a low-carbon economy.

A Just Transition

Recognising the threat of climate change and the development potential of green economy strategies, the South African government has embarked on a sustainable developmental pathway, where social equity, economic development, and environmental sustainability go hand-in-hand. A just transition is critical for addressing South Africa's socio-economic challenges of unemployment, poverty, and inequality, while enabling economic development through environmentally-sustainable policy and business practices.

Green nature-based COVID-19 inclusive economic recovery policies can provide win-win solutions for people, business, and nature, in catalysing the transition to an inclusive sustainable economy. As such, they will not only mitigate the impacts of future environmental degradation, but also uphold the value of nature, upon which economic development and human well-being is dependent.

This **Green Economy Technical Report** provides an overview of the following:

- Strategies and policies for a green economy;
- Sustainable finance for a green economy;
- Sustainable consumption and production for a circular economy;

- Economic inclusion within the green economy; and
- South Africa's green recovery from COVID-19.

The report is largely based on the four thematic concept notes from the PAGE 2019 Ministerial Conference, with subsequent additions to align it more closely with the current context.

Strategies and Policies for a Green Economy

South Africa's low-carbon transition needs to be supported by an effective, enabling policy environment. A single policy measure, such as a carbon tax, cannot affect a transition to an inclusive and sustainable green economy on its own. Nor can a single measure effectively address environmental issues while considering other socio-economic implications. Rather, an inclusive mix of comprehensive, progressive, diverse yet complementary and aligned policy measures are required to enable the transition to an inclusive green economy.

Conducive institutional arrangements at the operational level are also required for ensuring effective implementation of policy measures in support of the transition. Such institutional arrangements are critical for all organs of state, and South Africa has multiple channels for facilitating alignment and coordination between different policies and measures. Targeted interventions also need to cater for a variety of different situations and stakeholder readiness and capacity to transition to support policy implementation.

Given the diversity of stakeholders, and their conflicting interests and priorities, **social dialogue is critical for effective policy development and implementation** in South Africa. Engaging stakeholders through participatory social dialogue is critical for overcoming barriers and challenges, and supports the development and implementation of more relevant, resilient, and adaptable policies.

Monitoring and evaluation (M&E) is also important for measuring the impacts (positive and negative) of different policies and measures and the progress being made in the transition to an inclusive green economy. While South Africa has various M&E frameworks in place, collating knowledge and information from all these sources remains a challenge. The Green Economy Progress (GEP) Measurement Framework could provide a suitable tool for measuring South Africa's progress towards a green economy and could help to address broader M&E challenges. It is also complementary to existing public sector reporting systems.

This report identifies and discusses several barriers to the green economy, including institutional risks and barriers; domestic policy uncertainty and misalignment; political and economic barriers; and transitional risks.

The following **recommendations** are put forward to address these barriers:

- Strengthen governance across all levels of policy-making and government.
- Develop and align all policy to a common future low-carbon and inclusive economy.
- Improve policy alignment and coordination.
- Develop and effectively implement a centralised data, information, and M&E framework.
- Mitigate transition risks by improving resource-efficiency of exports exposed to potential carbon trade barriers.
- Implement the Sector Jobs Resilience Plans.

Sustainable Finance for a Green Economy

Funding the transition to a low-carbon inclusive economy will need to draw on both public and private sources of finance, redirect finances away from harmful investments, such as fossil fuel subsidies, and develop and implement new innovative financing models. Understanding how to 'unlock' such significant funding is therefore central to the green transition.

There are two main priority areas in considering best practices for unlocking green finance opportunities (both globally and in South Africa). The first is access to new and emerging markets, while the second is improved risk management in buying down risk to enable investment. Both are important contributing factors for long-term sustainability in the financial sector, and both provide new opportunities to promote green finance through the enabling environment and market practices.

Best practice for supporting an enabling environment for sustainable finance includes employing sustainable fiscal policy; developing and implementing international and national standards (such as Equator Principles); and implementing inclusive finance mechanisms.

Best practice with regards to market mechanisms include dedicated green funds; ethical and green banks; natural capital investment; investments in sustainable agriculture, human capital, green

infrastructure and innovation and information; credit enhancement and de-risking investments; umbrella facilities and co-investments; and project pipeline support to improve project bankability.

Barriers to green finance identified in the report include a weak enabling environment for sustainable finance; general economic barriers; negative perceptions of green project characteristics and activities; lack of dedicated funding; lack of bankable projects; and a skewed focus on the energy system (for example, by way of higher levels of investment into renewable energy to mitigate climate change relative to investments in water security or biodiversity).

The following high-level **recommendations** are put forward to overcome these challenges:

- Strengthen the enabling environment for sustainable finance.
- Implement best practice and market strategies for the establishment and enforcement of financing accountability frameworks.
- Implement central bank interventions.
- Issue green and other sustainable bonds.
- Strengthen financial partnerships and multi-stakeholder collaboration.
- Build on lessons from South Africa's Renewable Energy Independent Power Producers Procurement Programme (REIPPPP).

Closing the Loop on Sustainable Consumption and Production for a Circular Economy

The objective of sustainable consumption and production (SCP) approaches is to minimise the environmental impacts of consumption and production behaviour and support socio-economic development within the carrying capacity of the environment.

Improving SCP is critical for decoupling economic

growth from environmental degradation and natural resource depletion. It is the efficient use of natural resources and the minimisation of waste to meet society's needs, without depleting the planet's finite resources, and conserving them for the benefit of future generations.

SCP is regarded as being a cross-cutting element of the green and inclusive transition to a sustainable economy, as it cuts across energy, agriculture, manufacturing and construction, extractive industries, water, and waste sectors. Global best practices for SCP include multi-stakeholder engagement; financial incentives and punitive measures; eco-labelling to promote sustainable consumption; corporate sustainability reporting; and sustainable public procurement.

While South Africa does not have a standalone SCP policy framework, it has embedded such policies and measures into various existing policy frameworks, such as the Carbon Tax Act 15 of 2019 and the Waste Act 59 of 2008 (via Extended Producer Responsibility Regulations). Consumers also have a role to play. They need to be empowered to make sustainable choices through knowledge and awareness campaigns and capacity-building.

The most significant **barrier to the uptake of SCP practices** are behavioural barriers for both consumers and producers. These include individual barriers, such as values, trust, knowledge, and awareness;

and structural barriers, such as affordability (price), culture, social norms, brand image, and eco-labelling. Given the levels of income inequality, poverty, and unemployment, price and access arguably become deeply entrenched barriers in the South African context, and are beyond the control of the individual consumer.

The following **recommendations** are put forward for strengthening SCP practices in South Africa:

- Reinforce the enabling environment and ensure policy coherence and alignment.
- Develop and provide mandatory sustainable public procurement requirements across all spheres of government, given its purchasing power.
- Host multi-stakeholder engagements to improve policy and to foster collaboration.
- Strengthen expertise and capacity for circular economy practices across sectors, and improve resource allocation to such activities.
- Ensure that effective M&E frameworks are in place, not only for policy implementation but also for monitoring material availability and movement through a circular economy.

Economic Inclusion within the Green Economy: A Case for Small Businesses in a Just Transition

A just transition is broadly accepted as a strategy to ensure that the transition to a low-carbon green economy does not excessively impact workers and low-income communities who currently rely on carbon-intensive industries for their jobs and livelihoods. Going beyond this, a just transition also seeks to take advantage of the opportunities for job creation and sustainable economic development offered by the low-carbon transition. Another critical dimension of a just transition in South Africa is the inclusion of women and youth in the low-carbon economic opportunities and in decision-making platforms.

Micro-, small- and medium-sized enterprises (MSMEs) play an important role in South Africa's economy and society, by providing income generation and wealth-building opportunities for people who might not be able to access more formal alternatives. Small businesses also focus on local economic activities and services and play a critical role in local economic development, innovation, and social upliftment, and are integral in pervasive adaptation processes that define an inclusive economy. They are more likely to seize opportunities afforded by a green economy and act as bottom-up agents of change. Small-scale and subsistence farming, bioprocessing, waste picking, recycling, upcycling, and green infrastructure,

technology and construction, are a few green activities occurring in the informal economy/small business sector in South Africa. **MSMEs are therefore important role players in a just transition to a green economy.**

The potential benefits for inclusive and suitable development from small businesses remain largely unharnessed, despite their significant role in the economy and society. Further, despite government efforts, growth in small business has remained limited over the past 20 years. This has been exacerbated by the impacts of COVID-19 on small businesses. **Special attention needs to be given to designing incentive and support programmes for MSMEs.**

Barriers and risk to MSMEs in the just transition context include generic barriers, such as limited resources, and the additional challenges that come with green enterprises, such as limited public awareness and demand for green products/services; financial and institutional barriers; limited skills and

education; and climate change and transitional challenges.

The following **recommendations** are put forward for supporting small businesses for a just transition:

- Develop and implement a multi-criteria approach for small business support (beyond just economic outcomes).
- Strengthen collaboration through social dialogue, networks, and partnerships.
- Reframe the regulatory framework for MSMEs in the green economy.
- Reframe skills development for a green economy.
- Enhance knowledge and data for small businesses.

A green and just recovery from COVID-19 should also prioritise small business support, to ensure that they continue to play a critical role in the economy and in supporting a just transition.

South Africa's Green Recovery from COVID-19

The COVID-19 Pandemic has had severe impacts on the South African economy, with significant contractions in GDP growth and employment. These impacts have deepened the structural fault lines in the economy and have contributed to the triple challenge of unemployment, poverty, and inequality.

Economic recovery policies for COVID-19 can have significant future impacts depending on the design of these interventions. If an economic recovery policy follows a business-as-usual approach, with more 'brown' interventions, it risks locking the economy into an unsustainable development trajectory. Instead, economic recoveries should prioritise sustainable or 'green' approaches and interventions. These can support an inclusive economic transition and address South Africa's developmental and socio-economic challenges, while simultaneously decoupling economic growth from environmental degradation.

South Africa's COVID-19 response broadly follows a three-phased approach:

- **Phase 1** has and continues to implement **short-term health responses** to save lives and curb the spread of the virus.
- **Phase 2** involves interventions to support the economy while also controlling health risks, including **short- to medium-term responses**, such as the reprioritisation of the National Budget and the R500 billion COVID-19 Rescue Package to support workers and business.
- **Phase 3** is a **medium- to long-term response**, aimed at reconstructing and transforming the economy into a sustainable, resilient, and inclusive economy, outlined in the Economic Reconstruction and Recovery Plan (ERRP).

The ERRP aims to rebuild a sustainable, resilient, and inclusive economy through an infrastructure-led economic reconstruction and recovery pathway, with aggressive investments in infrastructure as a means of stimulating various economic sectors.

The ERRP acknowledges the co-benefits of a green economic transition in addressing South Africa's developmental challenges, while also driving economic competitiveness and supporting energy, food, and water security. For example, the ERRP speaks to how green economy interventions in agriculture can strengthen efforts towards resilient and drought-resistant crops, and in turn contribute to food security and the sector's competitiveness.

According to a report by Cambridge Econometrics and PAGE, a more ambitious green recovery relative to the policies set out in the ERRP are estimated to deliver approximately 5% more GDP growth, 0.5% less unemployment, and 23% lower greenhouse gas (GHG) emissions by 2030. Although the current ERRP, if implemented fully, may deliver positive economic growth by 2030.

There are several **financing options** available for funding a larger green stimulus policy:

- South Africa's debt-to-GDP ratio is in line with other developing economies and there is some space to take on more debt without risking a sovereign debt crisis. South Africa has significant foreign exchange reserves that can be used to cover more foreign debt.
- Judicious domestic borrowing, using mechanisms such as green bonds, climate bonds, or the like of COVID-19 solidarity bonds, could support a green stimulus. This can direct finance into sustainable solutions and the resulting debt would at least be 'green' debt, serving environmentally-sustainable ends.
- Fossil fuel subsidies should also be redirected to subsidise a green recovery.
- Quantitative easing (QE) is another option for raising finance and tends to have a positive impact on government's debt portfolio, pushing bond yields down and improving the country's fiscal position.

Conclusion

While South Africa has made significant progress towards transitioning to an inclusive and low-carbon economy, both in terms of the existing suite of policies and action on the ground, it remains a carbon-intensive and unequal economy.

The COVID-19 Pandemic has presented a glimpse into the future impacts of climate disasters, and while its impacts have been devastating, the recovery presents a unique opportunity to catalyse the just transition to a low-carbon economy for the benefit of all South Africans.

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List of Acronyms

10YFP	Global 10 Year Framework Programmes
ADAPT	Advanced Data Planning Tool
AODP	Asset Owners Disclosure Project
ASISA	Association of Savings and Investment South Africa
BMU	International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BRT	Bus Rapid Transit
CBI	Climate Bonds Initiative
CDM	Clean Development Mechanism
CDP	Carbon Disclosure Project
CICSA	Climate Innovation Centre South Africa
COSATU	Congress of South African Trade Unions
CPLC	Carbon Pricing Leadership Coalition
CRISA	Code for Responsible Investing in South Africa
CSR	Corporate Social Responsibility
DALRRD	Department of Agriculture, Land Reform and Rural Development
DBSA	Development Bank of Southern Africa
DFFE	Department of Forestry, Fisheries and the Environment
DFI	Development Finance Institutions
EAP	East Asia and Pacific
EITI	Extractives Industries Transparency Initiative
EMF	Ellen MacArthur Foundation
EP	Equator Principles
EPWP	Expanded Public Works Programmes
ERRP	Economic Reconstruction and Recovery Plan

ESEID	Economic Sectors, Employment and Infrastructure Development
ESG	Environmental, Social and Governance
ESMAP	Energy Sector Management Assistance Programme
EU-ETS	European Union Emissions Trading Scheme
FAO	Food and Agriculture Organisation of the United Nations
FCLT	Focusing Capital on the Long-Term
FEDUSA	Federation of Unions of South Africa
FOSAD	Forum of South African Directors-General
GBCSA	Green Building Council of South Africa
GEN	Global Ecolabelling Network
GEP	Green Economy Progress
GFC	Global Financial Crisis
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPP	Green Public Procurement
GRI	Global Reporting Initiative
HLPF	High Level Political Forum
ICCC	Intergovernmental Committee on Climate Change
ICT	Information Communication Technology
IDFC	International Development Finance Club
IFC	International Finance Corporation
IIRC	International Integrated Reporting Council
ILO	International Labour Organisation
IMF	International Monetary Fund
IOE	International Organisation of Employers

IPAP	Industrial Policy Action Plan
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
JPOI	Johannesburg Plan of Implementation
JSE	Johannesburg Stock Exchange
LEDS	Low Emissions Development Strategy
MEC	Mineral Energy Complex
MINMEC	Ministerial Political Structure
MINTECH	Ministerial Technical Structure
MSME	Micro-, Small- And Medium-Enterprises
NCD	Nationally Determined Contributions
NDP	National Development Plan
NEDLAC	National Economic Development and Labour Council
NEMA	National Environmental Management Act
NEPAD-IPPF	New Partnerships for Africa's Development Infrastructure Project Preparation Facility
NEVA	National Employment Vulnerability Assessment
NSSD	National Strategy for Sustainable Development
PCCC	Presidential Climate Change Coordinating Commission
PDC	Portfolio Decarbonisation Coalition
PES	Payment for Ecosystem Services
PPP	Public, Private Partnerships
QE	Quantitative Easing
REIPPPP	Renewable Energy Independent Power Producers Procurement Programme

SACTU	South African Congress of Trade Unions
SAFTU	South African Federation of Trade Unions
SAMRC	South African Medical Research Council
SARB	South African Reserve Bank
SASB	Sustainability Accounting Standards Board
SCP	Sustainable Consumption and Production
SDG	Sustainable Development Goals
SEIAS	Socio-Economic Impact Assessment System
SJRP	Sector Jobs Resilience Plans
SPP	Sustainable Public Procurement
SSE	Sustainable Stock Exchanges
SWH	Solar Water Heater
SWSA	Strategic Water Source Areas
TCFD	Task Force on Climate-related Financial Disclosures
UIF	Unemployment Insurance Fund
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

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About PAGE



The PAGE Programme

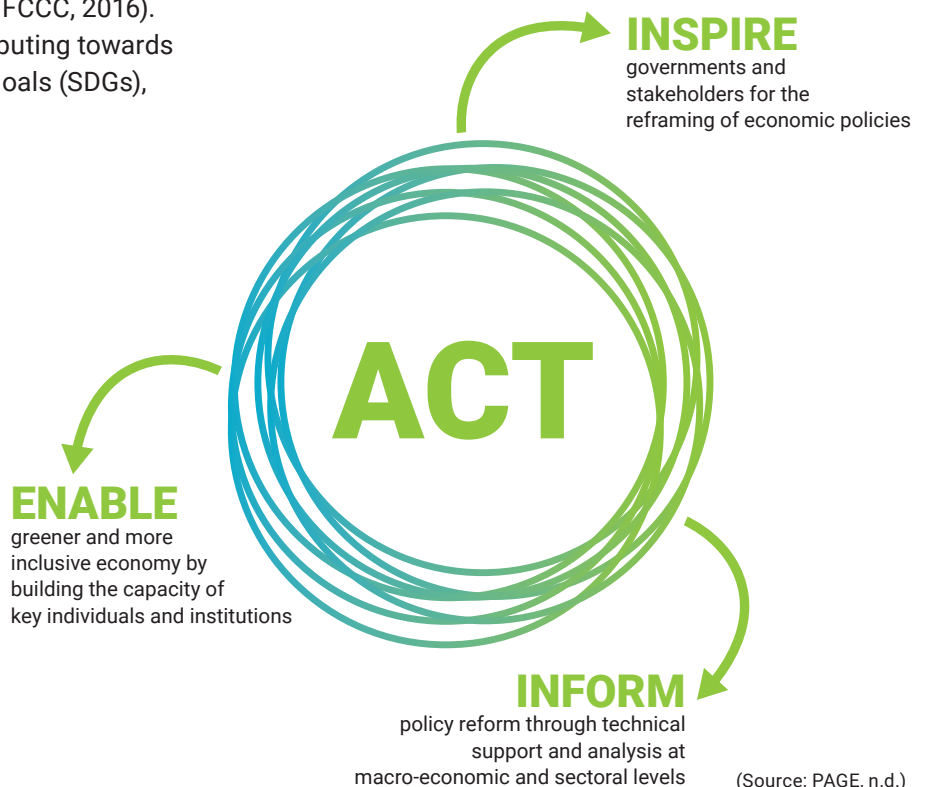
The Partnership for Action on the Green Economy (PAGE) Programme was launched in 2013, in response to a call to action at the 2012 Rio+20 (the UN Conference on Sustainable Development) in Brazil, for governments, business and the United Nations (UN) to support countries transitioning towards a green economy (PAGE, 2019a; PAGE, n.d.).

The goal of the PAGE programme is to prioritise sustainability across economic policies and practices for advancing the 2030 Agenda for Sustainable Development (UN, 2015a) and the Paris Agreement (UNFCCC, 2016). It assists participating countries in contributing towards achieving the Sustainable Development Goals (SDGs), and particularly SDG 17.



“Strengthen the means of implementation and revitalise the global partnership for sustainable development” (PAGE, n.d.).

PAGE supports participating countries in reframing their economic policies and practices around sustainable development, for strengthening the ecological foundations of their economies to support job creation and economic growth, while reducing inequality and poverty (PAGE, 2019a). Through innovative partnerships and tailor-made support, the PAGE programme creates scalable models for transitioning partner countries’ economies into more inclusive, circular, and sustainable economies of the future.



The South African PAGE Country Programme

The South African PAGE country programme commenced in 2016, offering a unique set of tools, expertise, and networks to help South Africa respond to the diverse and rapidly evolving opportunities for 'greening' an inclusive economy. The Department of Forestry, Fisheries and the Environment (DFFE) is the national coordinating Ministry, while the International Labour Organisation (ILO) serves as the PAGE lead

agency in South Africa, wherein a PAGE National Coordinator is placed. PAGE supports policy coordination and collaboration, and helps to improve institutional and human capacities. The South African PAGE country programme was originally planned to conclude at the end of 2020, however, with the impact of COVID-19, it was extended to April 2022 (PAGE, 2019a).

THREE PAGE OBJECTIVES IN SOUTH AFRICA:

1. **Collaboration and coordination:** Contribute to better policy coordination, strengthen dialogue, and deepen collaboration in green economy policy planning and implementation processes.
2. **Enabling factors for green opportunities:** Identify enabling factors for selected green economy sectors to promote sector reform.
3. **Enhanced green economy learning:** Strengthen capabilities through green economy training, learning, and knowledge-sharing, including support for national learning institutions in South Africa.

Third PAGE 2019 Ministerial Conference



South Africa hosted the Third PAGE Ministerial Conference in Cape Town from 9–11 January 2019 under the theme: Advancing Inclusive and Sustainable Economies (PAGE, 2019a). The Conference provided an opportunity for key stakeholders to assess their progress and achievements, reflect on lessons learnt, and outline a pathway to accelerate the green economy transition. The Conference gathered 585 participants from 48 countries and was structured against **four primary themes** (PAGE, 2019b):

1. How to unlock green finance?
2. Strategies and policies for a green economy
3. Economic and social inclusion
4. Sustainable consumption and production (SCP)

Each theme was discussed in a dedicated session, which offered insights from lessons learnt and identified

tangible tools, ideas, structures, and instruments that member countries, business, developmental organisations, and the general public could use in moving forward and making progress in transitioning to a low-carbon green economy (PAGE, 2019a).

The Conference identified **five key components** necessary for a transition to a low-carbon and climate-resilient economy (PAGE, 2019a):

1. A shared vision that unites all stakeholders;
2. Strong political leadership to steer the transition at a national and global level;
3. Social dialogue and citizen participation to drive grassroots support for the transition;
4. Partnerships to ensure that the transition is implemented across all sectors of society; and
5. The right legislative framework, policies and incentives to regulate, motivate, and drive behaviour change.

The *Third PAGE Ministerial Conference Report* (PAGE, 2019a) captures the proceedings of the Conference and provides a good summary of the discussions and debates over the three days.

Further, event greening measures were implemented with the event's carbon footprint calculated at 1 260 tons of carbon dioxide (tCO₂) (including international flights) in hosting the Conference (PAGE, 2019b). A total of 1 360 tCO₂ was offset through a locally identified carbon

offset project – Reliance Compost – and invariably concluded in the Conference being carbon-neutral (PAGE, 2019b). The Conference concluded with the proposed Cape Town Action Pathways.

Cape Town Action Pathways Towards 2030

The document, *Cape Town Action Pathways Towards 2030*, summarises key policy messages and action pathways that are essential for advancing inclusive and sustainable economies and achieving the 2030 Agenda for Sustainable Development (PAGE, 2019c).

These action pathways include (PAGE, 2019c):

1. Re-invent economies as inclusive green economies.

- Redesign linear economic models of production, consumption and investment, for sustainability and circularity.
- Transform the financial system to serve society, and to drive sustainability and social inclusion to achieve the SDGs and the Paris Agreement.
- Mobilise a critical mass of people and institutions that support an inclusive movement – this is essential for changing political, economic, and social systems.

2. Anchor green policies and strategies in collaborative governance.

- Ensure that policies and strategies for a green and inclusive transition promote collaborative governance, based on trust and broad citizen participation and ownership.
- Ensure that long-term development policies and strategies for a just transition are in place – they are critical for managing the employment and social impacts of the transition to a low-carbon and resource-efficient economy.

3. Focus on economic, social and political inclusion.

- Ensure that no one is left behind by the transition, by shaping, acting on and reviewing economic, social, and political agendas together with diverse and often marginalised people and institutions.

- Ensure the inclusion of and participation by women and youth for equitable access to the benefits and opportunities resulting from environmental, social, and economic progress.
- Democratise the ownership of the means of production and strengthen cooperation and trust between government, business, labour, and civil society.

4. Create the future of work we want.

- Reorganise economies towards improved resource-use efficiency, suitability, and resilience.
- Recognise, promote, and protect work as a fundamental aspect of human dignity, livelihoods, and aspirations of all women and men.
- Ensure that there is the necessary policy support for small and medium enterprises who represent inclusive means for creating jobs for low-skilled workers, so that they are able to benefit society beyond just profit-generation.

5. Strengthen partnerships and multilateralism.

- Ensure that there are multi-stakeholder partnerships, cross-ministry collaboration, strengthened multilateral systems, and effective international cooperation for the transitioning to inclusive and sustainable economies.
- Strengthen partnerships in research, innovation, technology, finance, and investment – they are critical for ensuring evidence-based decision-making and a robust science-policy interface.
- If required, establish new multi-actor approaches to policy implementation on the ground. Joint programming in the PAGE model should also be encouraged with the aim of growing the number of countries supported to achieve the Sustainable Development Agenda 2030.

The Cape Town Action Pathways envisions the following steps to support countries in the pursuit of inclusive and sustainable economies (PAGE, 2019c):

1. **Strengthen South-South cooperation** to promote exchange between current and graduating PAGE countries, including other stakeholders in instilling green economic transitions.
2. **Enhance PAGE national governance and delivery mechanisms** to promote participation of key state and non-state actors, particularly social partners, the private sector, civil society, and youth.
3. **Expand and scale-up the PAGE programme** beyond the current 10-year horizon to 2030 to offer services to a larger number of countries requesting support and wishing to continue their respective financial commitments.
4. **Integrate action pathways into PAGE programming** and related programmes, and promote them in global fora, including the UN Environment Assembly, High Level Political Forum (HLPF), and UN conferences on economic and sustainability issues.

About the Report

The Green Economy Transformation in Cooperation with PAGE – Synergies between Low-Carbon Pathways and Sustainable Development Goals (SDGs) (in short, the GET Programme 2018–2021) is a Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and UNEP-implemented programme. It aims to improve knowledge and capacity related to green economy approaches and instruments at the international level and in selected partner countries, including South Africa.

The GET Programme activities for South Africa are inclusive of both technical and financial support, primarily to DFFE, in advancing a low-carbon, inclusive green economy. This support is funded through the International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

In 2018, GIZ provided support to DFFE in planning and preparing for the 2019 PAGE Ministerial Conference. This included consultative stakeholder roundtables and the development of four thematic concept notes, which provided context and a South African perspective to guide the thematic sessions of the Conference.

In addition to the preparatory aspects for the Conference, the GET Programme supported the DFFE in commissioning this report.

This report is largely based on the four thematic concept notes from the 2019 Conference, with subsequent additions to align it more closely with the current context.





Chapter 1

Introduction

The Age of Humans

Since the first Industrial Revolution in the 1800s, human activity and the rapid expansion of the global economy have pushed four of the Earth's nine critical ecological processes beyond their planetary boundaries¹ (Steffen et al., 2015b). Geologists define this new, human-dominated geological epoch as the *Anthropocene*, or 'age of humans' (Lewis & Maslin, 2015; Steffen et al., 2015a).

Four of the nine critical ecological processes pushed beyond their planetary boundaries: biosphere integrity; climate change; novel entities; stratospheric ozone depletion; atmospheric aerosol loading; ocean acidification; biogeochemical flows; freshwater use; and land-system change.

Anthropogenic impacts on planetary boundaries have resulted in environmental crises in terms of biodiversity loss, ecosystem degradation, and climate change (WWF, 2018a; IPCC, 2018). These crises have significant impacts on human health and well-being, society, and the economy. Climate disasters can damage or destroy productive capital and supporting infrastructure, resulting in reduced economic growth, job losses, and poverty traps (Arp, 2020). South Africa experienced significant economic and job losses during the prolonged drought between 2015 and 2018, with the City of Cape Town almost running out of water completely – referred to as 'Day Zero' (Arp, 2020).

Diseases like COVID-19, have a direct link to continued unsustainable anthropogenic pressures on natural ecosystems and biodiversity (UNEP, 2020; Lorentzen et al., 2020; Conservation International, 2020; Dobson et al., 2020). Continued deforestation, land-use change, and encroachment on animal habitats, reportedly

increase the transfer of diseases from wild species to humans. This is thought to be the main cause for the rise in occurrences of new human diseases, such as COVID-19, and highlights the importance of protecting and restoring nature to prevent future pandemics (UNEP, 2020; Lorentzen et al., 2020; Conservation International, 2020; Dobson et al., 2020).

A sustainable or 'green' economic recovery from COVID-19 is therefore paramount. According to Hepburn et al. (2020), traditional, 'brown' recovery strategies, while potentially beneficial in the short-run, risk locking economies into unsustainable pathways in the long-run. This could reinforce economic dependencies on fossil fuels and continued large-scale deforestation, leading to increased environmental degradation and a potential downward spiral to the eventual collapse of natural systems that support human well-being and economic development.

Green, nature-based economic recovery policies can provide win-win solutions for people, business, and nature. According to a World Economic Forum report on the *Future of Nature and Business* (WEF, 2020a), green recoveries can unlock an estimated **US\$10 trillion (R160 trillion) in business opportunities and 395 million jobs worldwide**, by transitioning three economic systems that are responsible for roughly 80% of nature loss:

- Food, land, and ocean use;
- Infrastructure and built environment; and
- Energy and extractives systems.

"The outbreak of epidemics like COVID-19 reveal the fundamental tenets of the trade-off we consistently face: humans have unlimited needs, but the planet has limited capacity to satisfy them" (UNEP, 2020).

¹ In 2009 the concept of 'planetary boundaries' was introduced as a science-based approach to monitoring and understanding anthropogenic impacts on Earth's ecological system (Steffen et al., 2015b). It defines nine planetary boundaries, or environmental limits, within which humanity can safely operate.

PROTECTING NATURE AND PREVENTING PANDEMICS

Over the last century, **every year has seen an average of two new viruses spill over** from their natural hosts to humans, including some of the most damaging, such as MERS, SARS, HIV, the 2009 H1N1 epidemics, Ebola and COVID-19 (Dobson et al., 2020). The risk of future pandemics is only getting worse, in terms of increasing incidence and human health impact. Increasing interactions between wildlife and people, deforestation and land-use change, combined with a highly mobile and interconnected global economy, is the perfect melting pot for the rise and rapid spread of new pandemics.

COSTS SAVED

According to Dobson et al. (2020):

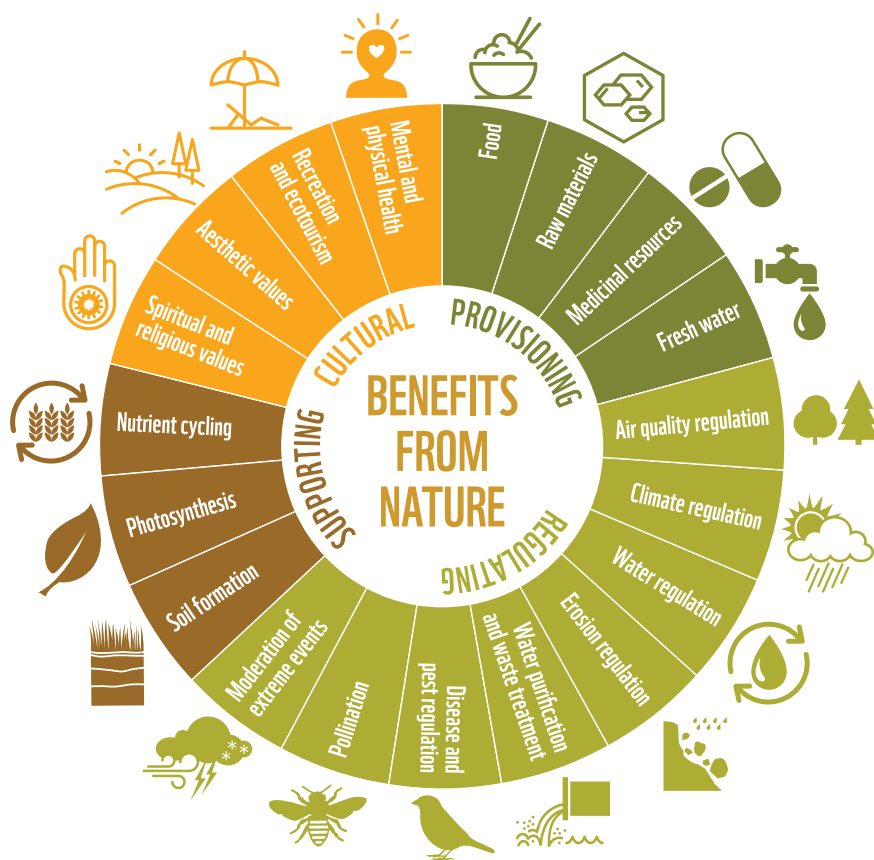
- Preventing future pandemics through actions to reduce deforestation and habitat destruction

could carry a gross cost of between US\$22 and US\$31 billion (≈R352 and R496 billion) per year.

- Reducing deforestation carries an additional benefit of reduced greenhouse gas (GHG) emissions of approximately US\$4 billion (≈R64 billion) per year.
- Therefore, net prevention costs would range between US\$18 and US\$27 billion (≈R288 and R486 billion) per year.

COSTS LOST

In contrast, COVID-19 is likely to cost the global economy at least US\$5 trillion in lost gross domestic product (GDP) in 2020 (Dobson et al., 2020), without including the cost of lives lost. These costs also exclude external or additional COVID-19’s impacts on healthcare systems, such as increased morbidity, excess deaths, and the loss of intrinsic social benefits from foregone activities due to lockdowns and social distancing (Dobson et al., 2020).



“Nature provides an estimated US\$125 trillion (≈R2 000 trillion) in goods and services per year for the benefit of people and the economy” (WWF, 2018a).

(Source: WWF, 2018a.)

Figure 1.1: Human Well-Being and Economic Benefits Derived from Nature

In addition to protecting nature by avoiding and mitigating disasters, nature must also be protected to preserve the benefits it provides to the economy and to human well-being. All economic activity and human well-being ultimately depend on goods and services provided by nature, referred to as 'ecosystem goods and services'² (as depicted in Figure 1.1).

It is estimated that nature provides approximately **US\$125 trillion (≈R2 000 trillion)** per year in goods and services, making it a significantly valuable component of any country's wealth (WWF, 2018a). Therefore, to remain on the current trajectory of continued and unrestrained pressure on the planetary system, to meet humanity's unlimited needs is inconceivable.

1.1 The South African Context

1.1.1 Overview of the South African Economy

South Africa has benefitted from an abundance of natural and mineral resources to become one of the largest economies in Africa. Since the end of Apartheid, the country has made considerable gains towards improving the well-being of its citizens, with improved access to basic services and reductions in poverty (Stats SA, 2016; PAGE, n.d.; DPME, 2014; Stats SA, 2017). However, economic growth in recent years has been slow, with continual high rates of structural unemployment and inequality, exacerbated by the COVID-19 Pandemic.

In South Africa, the 10% highest income earners make 60% of total income.

South Africa is regarded as one of the most unequal countries in the world (Palma, 2016), with a per capita expenditure Gini coefficient³ of 0.65 (as measured in 2015) and where 10% of the highest income earners make 60% of the total income (Stats SA, 2019a).

Inequality in South Africa manifests itself in more than just income – in wealth, gender, age, sector, and geography. Despite marginal improvements to South Africa's structural challenges over the last two and a half decades, the triple challenge of unemployment, poverty, and inequality remain, and COVID-19 has reinforced these structural fault lines.

In contrast to the real economy, South Africa's financial sector is large, sophisticated, and extremely competitive by international standards.

According to the World Economic Forum's latest *Global Competitiveness Report* (2019):

- South Africa's financial system ranked as the 19th most competitive in the world, with a depth⁴ score of 75.6 (ranked 29th) and a stability⁵ score of 92.8 (ranked 32nd).
- The financial system's market capitalisation⁶ is 302% of GDP (ranked 2nd in the world), with domestic credit to the private sector⁷ at 146% of GDP (ranked 10th) (WEF, 2019).

2 Ecosystem goods and services include provisioning (food and fresh water); regulating (air quality, pollination, and climate regulation); supporting (nutrient cycles and soil formation); and cultural (recreation and ecotourism) benefits to humanity.

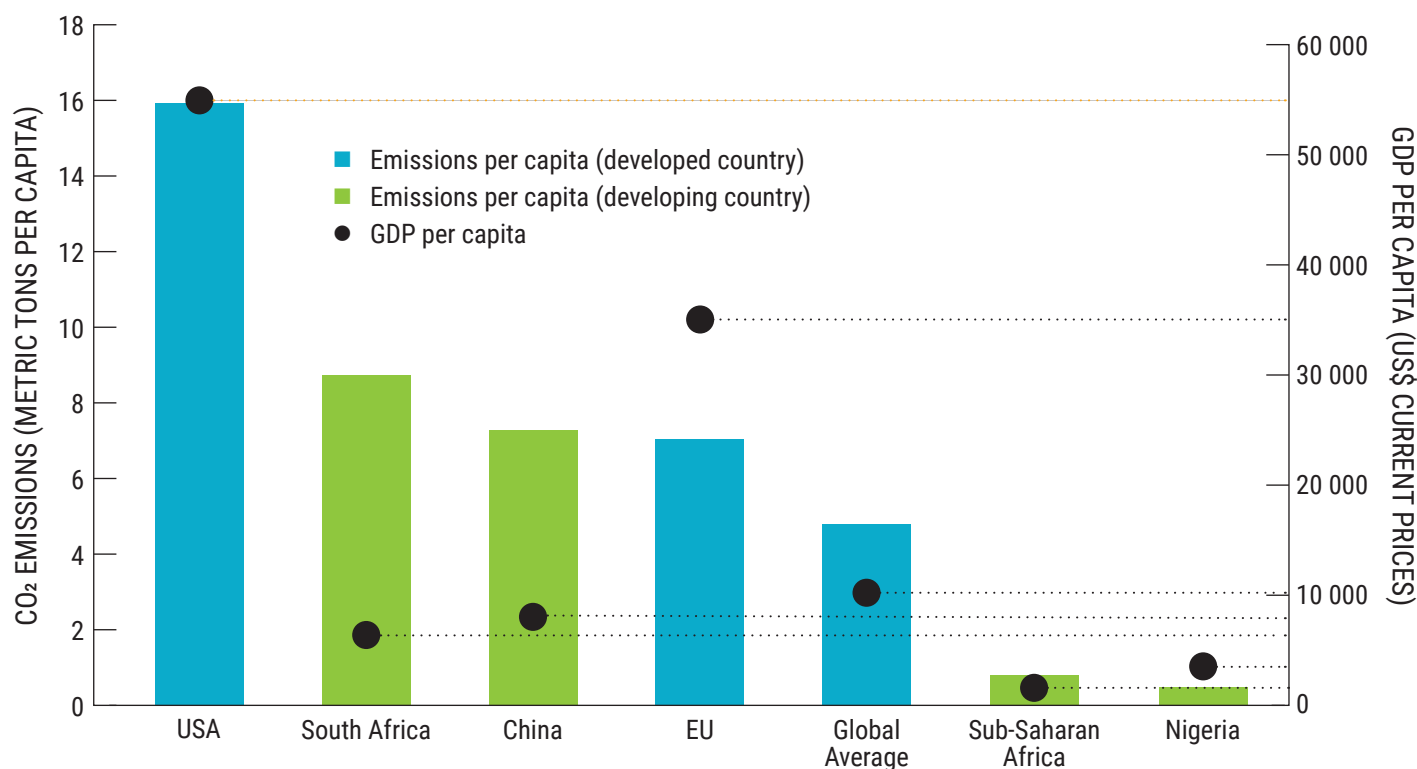
3 The Gini coefficient is a measure of income inequality. The closer to 1, the more unequal income inequality is.

4 Depth is a measure based on domestic credit to the private sector; financing of SMMEs; venture capital availability; market capitalisation; and insurance premium (WEF, 2019).

5 Stability is a measure based on soundness of banks; non-performing loans; credit gap percentage; and banks' regulatory capital ratio percentage of total risk-weighted assets (WEF, 2019).

6 Market capitalisation is the total value of listed domestic companies, expressed as a percentage of GDP, calculated as the share price of all listed domestic companies multiplied by the number of their outstanding shares. Investment funds, unit trusts, and companies whose only business goal is to hold shares of other listed companies are excluded. Data are end-of-year values (WEF, 2019).

7 Domestic credit to the private sector is the total value of financial resources provided to the private sector, expressed as a percentage of GDP. This indicator is computed as the sum of loans; purchases of non-equity securities; trade credits; and other accounts receivable that establish a claim for repayment provided by financial corporations to firms and households (WEF, 2019).



(Source: World Bank, 2014a; and World Bank, 2021.)

Figure 1.2: Carbon Dioxide Emissions Per Capita and GDP Per Capita (2014 Data) for Selected Economies

South Africa has historically been a carbon- and resource-intensive economy due to the interdependencies between the mining and energy sectors, dating back to the Industrial Revolution (Ntulie & Semelane, 2019). An abundance of low-cost coal reserves and a dominant primary sector based on mining, mineral processing, smelting, and synthetic fuels production, gave rise to this interdependency, known as the 'Mineral Energy Complex (MEC)'.

Today, South Africa remains one of the most carbon-intensive economies in the world. Coal-based electricity generation, carbon-intensive transport systems, and energy-intensive industries continue to drive unsustainable greenhouse gas (GHG) emissions, causing South Africa to punch well above its weight in terms of its contribution to global GHG emissions. In addition,

South Africa's GDP per capita is well below its emissions per capita. This suggests that the economy is not very carbon-efficient, and that carbon-intensive economic development is not driving economic growth or delivering socio-economic benefits.

Figure 1.2 illustrates the size of South Africa's GHG emissions and GDP per capita in relation to other large economies around the world. Not only is the economy vulnerable to climate change, it also disproportionately contributes to climate change.

South Africa's extensive GHG emissions and carbon-intensive economy go hand-in-hand with negative impacts on the environment and its citizens. The negative environmental cost⁸ associated with air pollution and GHG emissions from coal-based electricity

⁸ External costs or negative externalities, are negative side-effects imposed onto a third party (or broader society) by the production and/or consumption of goods or services. By definition, these are not accounted for (or internalised) by those producers or consumers and they are a cause of market failure, in that the market price does not reflect the true cost of the goods or services. The external costs of fossil fuels, for example, would include those associated with health impacts from air pollution and climate change, amongst others, along the value chain (Arp & Keen, 2020, p. 1).

The extended drought between 2015 and 2018 had significant impacts on the economy, for example via reduced agricultural output and effects on tourism and business. Reduced maize exports alone cost an estimated R12 billion in lost export revenue, while the City of Cape Town almost ran out of water – what was termed ‘Day Zero’ (Arp, 2020).

is estimated at R484 000/GWh of electricity (Arp & Keen, 2020). In 2019 Eskom distributed 200 210 GWh of coal-based electricity for local consumption (Eskom, 2019), equating to an external cost of just under R97 billion.⁹

This significant burden is carried by all South Africans in the form of health impacts from air pollution and losses and damages associated with climate change, amongst others.

1.1.2 The Climate Change Threat

South Africa is a water-scarce country and vulnerable to both the biophysical impacts of climate change and various socio-economic impacts from international and local responses to climate change, referred to as ‘transitional risks’ (Montmasson-Clair, 2019; Arp, 2020).

According to the Intergovernmental Panel on Climate Change’s (IPCC) *Fifth Assessment Report* (IPCC, 2013), and the *1.5 °C Special Report* (RSA, 2018), climate change is said to increase the frequency and intensity of extreme weather events, such as floods, fires, and droughts, to which South Africa and the economy are highly vulnerable.

South Africa also faces several transitional risks as countries and sectors begin to transition away from carbon-intensive activities. Jobs and livelihoods that rely on carbon-intensive sectors are at risk and need to be carefully managed through a just transition (Fleishman et al., 2020). Exports will begin to face carbon trade barriers (Maguire, 2020) as international trading partners begin to reduce their carbon emissions, including those imported from other countries.

The continued dependence on coal-based electricity and a high trade-to-GDP ratio suggests that most of South Africa’s GDP relies on carbon-intensive trade and exports, and is therefore vulnerable to carbon trade

barriers (TIPS, 2013; Arp, 2020). In an ever-increasingly carbon-constrained global economy, carbon trade barriers threaten the economy’s comparative advantage and international competitiveness.

There is also a risk that South Africa could miss out on critical funding opportunities as various financial institutions are moving away from financing fossil fuel-based activities. The Swedish Central Bank, for example, sold off its Canadian and Australian bonds due to high GHG emissions in both countries (Reuters, 2019; Arp, 2020). Oil and gas companies are also at risk of potential credit rating downgrades due to “*poor profitability, volatile prices and increasing pressure from renewable energy*”, according to Butler (2021).

1.1.3 Transitioning to an Inclusive Green Economy in South Africa

Recognising the threat of climate change and the development potential of green economy strategies, the South African government has embarked on a sustainable developmental pathway where social equity, economic development, and environmental sustainability go hand-in-hand (PAGE, n.d.). This is evident in the various policies and strategies that have been developed over the last several years, including the National Development Plan (NDP); Green Economy Accord; the Carbon Tax Act 15 of 2019; the Climate Change Bill; National Biodiversity Economy Strategy; the National Climate Change Adaptation Strategy; National Waste Management Strategy; and Extended Producer Responsibility Regulations, amongst others.

Within the South African context, an inclusive green economic transition translates into what has been termed as a just transition to an “*environmentally-sustainable, climate-resilient, low-carbon economy and just society*”, as outlined by the NDP (RSA, 2011a, p. 199).

⁹ This value is only based on the external costs associated with air pollution and GHG emissions impacts and can be considered an undervaluation of the total external cost associated with coal-based electricity. The total would include external costs associated with impacts across the whole coal-based electricity value chain, including for example, water usage, coal mining, transport, and waste.

A just transition is one that invests in and protects workers and communities who are vulnerable to both climate change and transitional risks (Fleishman et al., 2020). As such, a just transition is critical for addressing both South Africa's socio-economic challenges of unemployment, poverty, and inequality, while enabling economic development through environmentally-sustainable policy and business practices (Montmasson-Clair & Mudombi, 2019).

Social dialogue and engagement in various policy processes play an important role in the co-development of sustainable policies for the green economy and a just transition (Montmasson-Clair, 2019).

Just transition: an environmentally-sustainable, climate-resilient, low-carbon economy and just society, addressing South Africa's three socio-economic challenges of unemployment, poverty, and inequality.

1.2 Structure of the Report

This report is largely based on the four thematic concept notes developed for the PAGE 2019 Ministerial Conference:

- **Chapter 2 provides a review of policies and strategies for a green economy**, specifically with respect to policy direction, cohesion, and alignment for an effective enabling environment. It identifies barriers and risks to an inclusive green economy and concludes with high-level recommendations.
- **Chapter 3 reviews best practices for sustainable finance to support a transition to an inclusive green economy**. It discusses potential risks and barriers to sustainable finance and concludes with recommendations for strengthening and unlocking more sustainable finance in South Africa.
- **Chapter 4 discusses sustainable consumption and production (SCP) practices and the circular economy model**. It provides an overview of SCP best practices, reflects on the South African perspective, and investigates the application of SCP in selected economic sectors. The chapter concludes with potential challenges and barriers, and recommendations to overcome them.
- **Chapter 5 provides a short introduction to the just transition and how it is framed in the South African context**. It discusses the critical role that micro-, small- and medium-sized enterprises (MSMEs) play in the economy and in achieving a just transition. An overview of the barriers that might hinder small businesses' ability to transition is provided before concluding with some high-level recommendations.
- **Chapter 6 concludes the report with an overview of the impacts of COVID-19 in South Africa**, a review of South Africa's economic responses to COVID-19, and builds the case for a green stimulus policy (and potential financing options) for an inclusive recovery from COVID-19.



The background is an aerial photograph of a valley. In the foreground, a hillside is covered in autumn foliage in shades of orange and red. A white wind turbine stands on the left side of the hill. The valley below is a mix of green fields, forests, and small settlements. The sky is a clear blue. Overlaid on the image are several semi-transparent, wavy blue lines that sweep across the frame from the top left towards the bottom right.

Chapter 2

Strategies and Policies for a Green Economy

About this Chapter

This chapter provides a review of policies and strategies for a green economy, specifically with respect to policy direction, cohesion, and alignment for an effective enabling environment. It then identifies barriers and

risks to an inclusive green economy, before discussing various tools for decision-making, implementation, and monitoring. The chapter concludes with some high-level recommendations.

2.1 A Clear Vision for Policy Direction

Creating a clear national vision for an inclusive green economic transition is critical for providing the framework and overall policy direction for a sustainable and inclusive development pathway (Stafford & Facer, 2014; PAGE, 2017a; Montmasson-Clair, 2019). Backcasting¹⁰ from a future vision can help develop detailed pathways and roadmaps for managing and achieving an inclusive transition to a green economy (and green economic recovery from COVID-19).

There are several key policy documents that call for, and support an inclusive green economic transition, such as the National Development Plan (NDP), which outlines the need to transition to “*an inclusive, low-carbon and climate resilient society*” (RSA, 2011a). The National Strategy for Sustainable Development (NSSD) identifies a just transition towards a resource-efficient, low-carbon and pro-employment growth path (RSA, 2011b) as a key strategic objective for a green economy. Other strategic policy documents have similar statements (Montmasson-Clair, 2019).

However, a potential gap exists in that these policy statements do not necessarily constitute a strategic and coherent national vision (Stafford & Facer, 2014; PAGE, 2017a; Montmasson-Clair, 2019), and at times tend to position the green economy as a sector or ‘add-on’ to other developments in the country. This can result in a perceived lack of consistency and coherence across other policy frameworks critical for a green transition, such as mineral resources or infrastructure investment (Stafford & Facer, 2014; PAGE, 2017a; Montmasson-Clair, 2019).

It is therefore recommended that similar policy statements or visions of a just transition to a low-carbon and inclusive economy, be integrated into key policy documents, such as the Nationally Determined Contribution (NDC), Low Emissions Development Strategy (LEDS), the Integrated Resource Plan (IRP), and in the work being undertaken on the development of Sector Master Plans.

2.2 Policy Cohesion and Alignment

South Africa’s inclusive green economic transition needs to be supported by an effective enabling policy environment (Stafford & Facer, 2014; PAGE, 2017a; Montmasson-Clair, 2019). An effective enabling environment requires adequate alignment, coordination, and implementation of complementary and aligned

policies and measures to capitalise on co-benefits to reinforce and achieve their various objectives (Stafford & Facer, 2014; PAGE, 2017a; Montmasson-Clair, 2019). Therefore, policy cohesion and alignment across all government departments and national and provincial policies, particularly with regards to a just

¹⁰ Backcasting is a planning methodology of defining a desired future state and working backwards from there to identify policies and programmes required to achieve the vision. It connects the future with the present.

POLITICAL LEADERSHIP AND SOCIAL DEMAND ARE KEY INGREDIENTS FOR A GREEN TRANSITION

The transition to an inclusive green economy cannot be managed by a one-size-fits-all approach. It requires social demand and leadership from the highest levels of government (Montmasson-Clair, 2019). Political leadership must provide clear direction and create opportunities for sustainable economic development, which could foster public support if implemented correctly.

Yet, it is society that instinctively demands, shapes, and reacts to policies – either supporting or resisting them. It is here, at the interface between policy and social demand that interventions must foster awareness and adaptation, create ownership, and catalyse systemic change. Policies that do not engage wider society and its agendas are often perceived to be irrelevant and unnecessary (Montmasson-Clair, 2019).

Several countries have attempted to put sustainable development on their political agendas via presidential committees and super-ministries.¹¹ South Africa recently established the Presidential Climate Change Coordinating Commission (PCCC), which will “coordinate and oversee a just transition towards a low-carbon, inclusive and climate-resilient economy and society” (RSA, 2020b).

transition, is critical for strengthening the enabling policy environment.



Photo: Elsabe Gelderblom

However, there is a risk that certain combinations can undermine each other and lead to adverse side effects, which need to be identified early and prevented (Hood, 2013; Hood & Guelff, 2013). PAGE (2017a) identified 32 Acts, policies, and strategies, at both national and provincial levels, that support a green economy transition. However, since these were developed at different times and potentially even in different contexts, they can conflict with each other and weaken the enabling policy environment (Stafford & Facer, 2014; PAGE, 2017a; Montmasson-Clair, 2019).

For example¹¹:

- There is a misalignment between the various sectoral policies with regards to the responsibility for waste collection.
- Challenges still exist on key technology choices in the energy and transport space.
- There is a broader misalignment between South Africa’s sustainability objectives and other developmental priorities, which are at times viewed as conflicting priorities.
- There is still substantial support for carbon-intensive industries and sectors, as can be seen in the Economic Reconstruction and Recovery Plan (ERRP) and extensive fossil fuel subsidies (Burton et al., 2018; Rennkamps et al., 2018; Montmasson-Clair, 2019). Rather, support should be directed to sustainable and inclusive activities that can simultaneously address South Africa’s developmental and environmental priorities.

However, South Africa has made progress in this regard, as is evident in the roll-out of the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP); Bus Rapid Transit (BRT); Expanded Public Works Programmes (EPWP); and Sector Master Plans, amongst others (PAGE, 2017a). Consultation within government also occurs within the cluster and cabinet processes, to ensure alignment and to remove conflicts between policies.

¹¹ For example, France’s Ministry of Ecology, Energy, Sustainable Development and Spatial Planning, and Colombia’s Ministry of Environment and Sustainable Development (Montmasson-Clair, 2019).

2.3 Policy Implementation

Various policies and measures have been implemented across South Africa to support the green economic transition. These include fiscal- and market-based measures (taxes, subsidies, and trading schemes), and regulatory measures (standards and regulations). Voluntary measures (industrial agreements, voluntary certification, sectoral targets and pacts, and community action) also play a vital role in policy implementation, and often precede mandatory regulations (Somanathan et al., 2014; Montmasson-Clair, 2019).

At times, policies and measures do not account for transitional implications across value chains, impacting their effective implementation. In other words, they do not adequately account for the diverse socio-economic impacts of a transition along a particular value chain, and fail to propose tailored solutions. For example, the industrial development component of the mix of policy measures must simultaneously deal with firms that will benefit directly from the transition, and those that are threatened by it. Yet these constraints and difficulties remain largely unexplored (Montmasson-Clair, 2016). However, the updated National Employment Vulnerability Assessment (NEVA) and Sector Job Resilience Plans (SJRP) should shed some light on transitional employment impacts and strengthen the enabling environment.

Conducive institutional arrangements at the operational level are also required for ensuring effective implementation of policy measures in support of the transition (Stafford & Facer, 2014; PAGE, 2017a; Montmasson-Clair, 2019). Such institutional

arrangements are critical for all organs of state, and South Africa has multiple channels for facilitating alignment and coordination between different policies and measures, for example:

- The Forum of South African Directors-General (FOSAD);
- The Economic Sectors, Employment and Infrastructure Development (ESEID) Cluster;
- The Ministerial Political Structure (MINMEC);
- The Ministerial Technical Structure (MINTECH); and
- The Intergovernmental Committee on Climate Change (ICCC).

Despite these various channels, managing the transition to an inclusive green economy remains a key challenge, with instances of uncoordinated and duplicated work and contested responsibilities (Montmasson-Clair, 2019).

Targeted interventions also need to cater for a variety of different situations. Stakeholders with the capacity to transition on their own, for example, need to be further enabled, encouraged, or nudged in the right direction. Those that have limited capacity to transition need to be pulled up through government interventions to prevent the risk of socio-economic marginalisation as a result of the transition (Montmasson-Clair, 2019).

Therefore, differentiated and coordinated action is critical for addressing South Africa's socio-economic challenges, while gradually but purposefully, transitioning to a carbon-neutral and sustainable economic model (Montmasson-Clair, 2018).

2.4 Social Dialogue is Critical for Policy Development and Implementation

Given the diversity of stakeholders and their conflicting interests and priorities, social dialogue is critical for effective policy development and implementation in South Africa (Stafford & Facer, 2014; PAGE, 2017a;

Montmasson-Clair, 2019). Participatory policy processes can help build key partnerships and multi-stakeholder collaboration. They allow for knowledge-sharing and the articulation of alternative cultural and worldviews, while

providing stakeholders with a sense of ownership of a particular policy (Gidley, 2016). Engaging stakeholders through social dialogue is critical for overcoming barriers and challenges, and supports the development and implementation of more relevant, resilient, and adaptable policies (IOL, 2012; Gidley, 2016).

South Africa has a rich history of social dialogue, with the establishment of the quadripartite National Economic Development and Labour Council (NEDLAC) in 1994 and various other social agreements and compacts, such as the Green Economy Accord (RSA, 2011; Montmasson-Clair, 2019). New Acts and policies under development also go through a stakeholder engagement process, before going through the NEDLAC process. Trade unions who manage industrial relations are a key component for a just and inclusive transition to a green economy (ILO, 2010).

LEARNING FROM SUCCESSFUL SOCIAL DIALOGUE IN URUGUAY

Through very successful social dialogues and collective action from state-owned enterprises, trade unions, civil society, academia, and government, Uruguay was able to implement a rapid renewable energy revolution. More than 95% of the country's electricity is now derived from renewable sources. Uruguay is also able to localise the production of renewable energy technology, resulting in significant job creation in a just and inclusive transition to a sustainable economy. This is also thanks to a long-term energy policy (2005–2030) that includes and accounts for both environmental and socio-economic priorities (Sierra, 2016).

2.5 Tool Kits for Decision-Making, Implementation, and Monitoring

There are a variety of complementary tools for decision-making, implementation, and monitoring of policy. These include education and information provision; facilitated and enforced implementation; social engagement; and monitoring and evaluation tools (Stafford & Facer, 2014; PAGE, 2017a; Montmasson-Clair, 2019).

2.5.1 Awareness, Knowledge, and Capacity are Key Foundations

Information and awareness among stakeholders regarding the following is critical for effective policy implementation:

- Government actions (policy, laws, regulations, support programmes);
- Changing market or social dynamics (market and macro-economic trends, consumption and production patterns, technology advancements);
- Stakeholder initiatives (specific campaigns and projects); or
- Knowledge advancement (analytical tools and methodologies).

It is important to analyse stakeholders' knowledge, awareness, and capacity, to identify any gaps or vulnerabilities that need to be improved and strengthened. Various informative tools, such as websites, reports, awareness campaigns, and social dialogues can help address information and awareness barriers (IEA & IIP, 2012; Reinaud & Goldberg, 2012; Somanathan et al., 2014).

A centralised, accessible information repository (or database) for gathering information and analysing the impacts and progress of the green economic transition would be very useful to support informed decision-making, policy coherence, and for informing stakeholders (PAGE, 2017a; Montmasson-Clair, 2019). While there are various reporting/monitoring structures in place, such as the GHG Inventory, Air Quality Reporting Frameworks, and the Waste Information Management System, information is often outdated, incomplete, or scattered across multiple platforms, making it difficult to locate, access, and use (PAGE, 2017a; Montmasson-Clair, 2019).

Information about financing opportunities, for example, is not available in a single, up-to-date platform for relevant stakeholders to access, making finance more difficult to acquire. Accessing indigenous knowledge, traditional approaches, community-based projects, and grassroots initiatives for consideration and inclusion into policy- and decision-making, also remains a challenge (PAGE, 2017a; Montmasson-Clair, 2019). But this is not unique to South Africa.

EXAMPLES OF CENTRAL INFORMATION AND DATA TOOLS

- **Mongolia** monitors and maps their progress towards the country's Sustainable Development Vision 2030, their National Development Plan 2016–2020, and the SDGs, using the **Advanced Data Planning Tool (ADAPT)** – a cloud-based application system that supports critical data collection and analysis (Paris21, 2017).
- **Brazil** have developed a **Carbon Efficiency Index** through collaboration between the Brazilian Stock Exchange and the Brazilian Development Bank, which provides stakeholders with market and energy-efficiency information and encourages companies to monitor and disclose their GHG emissions. This tool has supported the development of performance indicators used to measure companies' progress on climate action (Kauffmann et al., 2012).

2.5.2 Monitoring and Evaluation for Evidence-Based Policy-Making

Monitoring and evaluation (M&E) is important for measuring the impacts (positive and negative) of different policies and measures, and the progress being made in the transition to an inclusive green economy. This information is critical for informing and adapting policies to remain relevant, up-to-date with best practices, and for addressing any unintended

consequences (Stafford & Faccer, 2014; PAGE, 2017a; Montmasson-Clair, 2019).

Gathering data and generating information on household and company activities, socio-economic responses to different policies, and managing the transition, is all part of the M&E process (Stafford & Faccer, 2014; PAGE, 2017a; Montmasson-Clair, 2019). Without an M&E process it is difficult to measure the success or failure of different policies and measures, and therefore adapting policies to remain relevant becomes difficult.

The information, knowledge, and M&E required for evidence-based decision-making, although growing rapidly in South Africa, remains a challenge. While government does have databases, they are not centralised in one central repository. There is no central M&E framework for monitoring and evaluating changes in macro-economic and market trends, consumption and production patterns, waste streams, resource-usage, or public and private financial flows (Stafford & Faccer, 2014; PAGE, 2017a; Montmasson-Clair, 2019).

While efforts have been made to address this gap, collating knowledge and information from different sources remains a challenge (Stafford & Faccer, 2014; PAGE, 2017a; Montmasson-Clair, 2019). Examples of such efforts are:

- National Treasury's *Financing a Sustainable Economy Technical Paper*;
- *Green Economy Review of South Africa's Industrial Policy Framework*;
- National Greenhouse Gas (GHG) Inventory;
- Mitigation Potential Analysis;
- Waste Information Management System; and
- System of Environmental and Economic Accounts and Experimental Ecosystem Accounts (Mudombi, 2018).

The Green Economy Progress (GEP) Measurement Framework (PAGE, 2017d, p. 1) could provide a suitable tool for measuring South Africa's progress towards a green economy and help address broader M&E challenges.

“UN Environment has developed a Green Economy Progress (GEP) Measurement Framework to help countries evaluate their overall progress towards an Inclusive Green Economy and to enable a cross-country comparison of progress” (PAGE, 2017d, p. 1). This M&E tool could be extremely useful in measuring South Africa’s progress towards an inclusive green economy.

2.5.3 Tools for Implementation and Monitoring

Templates, guidelines, methodologies, and manuals are among some of the tools available for supporting effective implementation of different policies and measures (Montmasson-Clair, 2019). South Africa has a number of guidelines and reporting structures to support the implementation of policy, such as the *Technical Guidelines for Monitoring, Reporting and Verification of GHG Emissions*. However, this can be strengthened further by promoting, streamlining, standardising, and ensuring easy access to these guidelines and to the reporting structures (Stafford & Facer, 2014; PAGE, 2017a; Montmasson-Clair, 2019).

Impact assessment tools, such as the Socio-Economic Impact Assessment System (SEIAS), are particularly important for ensuring an inclusive transition and efficient policy implementation. The SEIAS supports policy design and implementation by identifying the most appropriate action for addressing the root causes of socio-economic challenges, taking into account risks, benefits, and interactions with other policies and regulations. It does so by considering five broad criteria and evaluating policies against them: social cohesion;

EXAMPLES OF SYSTEMS TO MONITOR PROGRESS

Brazil has developed the **Leadership in Energy and Environmental Design Initiative** – a green building rating system that promotes and supports the incorporation of energy-efficiency and sustainable designs into operations and buildings (PAGE, 2016).

South Africa has a similar green building rating system. The **Green Building Council of South Africa** (GBCSA) works with public, residential, and commercial sectors to help them design, build, and operate buildings in a sustainable way (GBCSA, 2017). The rating system works on a one-to-six-star rating, based on a weighted score across nine categories, including energy; transport; water; emissions; land-use and ecology; and socio-economic factors (GBCSA, 2017). These rating systems can support policy implementation and monitor progress against policy goals.

security; economic inclusion; economic growth and investment; and environmental sustainability (DPME, 2015a; DPME, 2015b; TIPS, 2017a).

2.6 Barriers and Risks to an Inclusive Green Economy Transition

Despite progress on measures to enable a transition to an inclusive green economy, South Africa still faces various barriers and risks that inhibit the transition. These are grouped into cross-cutting thematic areas related to the institutional and economic barriers below. Others, such as financial barriers, are discussed in subsequent chapters.

2.6.1 Institutional Risks and Barriers

The absence of a clear narrative or vision to coherently guide the enabling environment, means that there is a risk that different stakeholders have divergent understandings about what an inclusive green economy is, what its goals are, and what is required to achieve it

(Gulati et al., 2018; Montmasson-Clair, 2019). This can lead to multiple inconsistencies between policies and national departments, which could translate into narrow, fragmented, and isolated implementation by both public and private stakeholders (Zikhali et al., 2016; Gulati et al., 2018).

Another potential barrier is the lack of institutional coordination around aspects of sustainability and the green economy, which can restrict implementation on the ground (Gulati et al., 2018). A concept of an inclusive green economy needs to be adopted and implemented across various ministries at all governance levels. While it is easy to argue for it at a rhetoric level, implementing it will face resistance. Therefore, institutional coordination for an inclusive green economy to achieve South Africa's developmental objectives needs to be strengthened (Gulati et al., 2018).

2.6.2 Domestic Policy Uncertainty

Domestic policy uncertainty also remains a potential barrier. A clear, stable, and coherent policy environment is critical for promoting innovation and the uptake of green technologies (Iacobuta et al., 2018). In South Africa, however, several aspects for facilitating a transition to an inclusive green economy remain overly dependent on direct policy interventions. This contrasts with the uptake of policies designed to promote renewable energy and energy-efficiency around the world.

2.6.3 Political and Economic Barriers

South Africa faces a number of political and economic challenges that influence domestic priorities and policies, such as the triple challenge of unemployment, poverty, and inequality (Gulati et al., 2018; RSA, 2011a).

In addition, the legacies of Apartheid remain persistent in the economy and society, and political will to transition to an inclusive green economy is also perceived to be low (Iacobuta et al., 2018; Gulati et al., 2018). Addressing these challenges remains a key priority for government, and rightly so. However, the narrow focus on economic and social development could detract from the broader vision of sustainable economic and social development (Gulati et al., 2018).



Despite substantial effort and progress to support the transition to a green economy, South Africa has not shifted from a carbon- and water-intensive economic model. The energy sector is dominated by one state-owned entity, Eskom, and abundant reserves of cheap coal remain an attractive source of energy for powering the economy (Gulati et al., 2018). Vested interests and the persistent dominance of South Africa's Mineral Energy Complex (MEC) can also be considered a barrier to a green economy. The MEC represents a vast amount of capital accumulation centred around powerful vested interests and mineral extraction and processing, presenting a significant political barrier to an inclusive green economy (Gulati et al., 2018). However, the REIPPPP has gone a long way to diversify South Africa's energy mix.

2.6.4 Transitional Risks

South Africa also faces several transitional risks as countries and sectors begin to transition away from carbon-intensive activities. Exports will begin to face carbon trade barriers (Maguire, 2020) as international trading partners begin to reduce their carbon emissions, including those imported from other countries. The continued dependence on coal-based electricity and a high trade-to-GDP ratio suggests that most of South Africa's GDP relies on carbon-intensive trade and exports, and is therefore vulnerable to carbon trade

barriers (TIPS, 2013; Arp, 2020). In an ever-increasingly carbon-constrained global economy, carbon trade barriers threaten the economy's comparative advantage and international competitiveness.

Transitioning away from sectors also threatens the jobs and livelihoods of those people who work in, and communities who depend on, those sectors.

Therefore, while the green economy presents new opportunities for sustainable growth, development, and job creation, it also risks significant job losses. Hence the call for a just transition to ensure that these socio-economic risks are managed and that the transition does not exacerbate unemployment, poverty, and inequality (Scholtz et al., 2020).

2.7 Recommendations

2.7.1 Strengthen Governance Across all Levels of Policy-Making

The transition to a green economy will require good governance through bottom-up and top-down frameworks to ensure broad participation and to stimulate public support, trust, and confidence. This is particularly important for re-orienting the economy away from unsustainable activities to more equitable and sustainable activities.

2.7.2 Develop a Long-Term Vision for South Africa's Sustainable Transition

Through an inclusive process, clarity and consensus must be reached on a long-term national vision and approaches for achieving South Africa's desired future. The Presidential Commission on Climate Change (PCCC) has been established and can play this role.

2.7.3 Ensure Policy Alignment and Coordination

Policy alignment and coordination to address both environmental and socio-economic perspectives, and to prioritise unemployment, inequality, and poverty must be promoted. This can be achieved by aligning sustainable development policies with international initiatives, such as the Sustainable Development Goals (SDGs), but tailored to local contexts. Sector Master Plans also provide an avenue for ensuring that industrial policy across key sectors is aligned and coordinated around sustainable development priorities. South Africa's multiple channels for facilitating alignment and

coordination between different policies and measures, such as FOSAD, the ESEID cluster, MINMEC, MINTECH, and the ICC, should be coordinated around sustainable development imperatives.

2.7.4 Develop and Implement a Centralised Data, Information, and M&E Repository

An option for future consideration is a centralised, accessible information repository (or database) for cataloguing green policies, frameworks, regulations, and initiatives; sharing best practices, knowledge, and tools; and outlining key stakeholder engagement opportunities. Such a repository or database should also monitor and evaluate the progress and impacts of different policies and measures for the green transition. It could be built on the back of existing frameworks and housed within Statistic South Africa, or the Department of Planning, Monitoring and Evaluation.

2.7.5 Mitigate Transition Risks

Mitigating transition risks is a critical part of the just transition and can be achieved through various activities. Two high-level recommendations in this regard are to:

- Improve resource-use efficiency (energy and water in particular) of export commodities exposed to potential carbon trade barriers; and
- Mitigate carbon-intensive job and livelihood losses by reviewing the NEVA (Makgetla et al., 2019) and implementing SJRPs (TIPS, 2020a).

Key Takeaways

1. Transition planning is important.

- Co-develop a 2050 vision for an inclusive and sustainable South Africa and backcast to develop clear roadmaps that outline socio-economic transitions across different sectors.
- Build a framework or roadmap for the transition, considering economic, social, and environmental elements in a holistic fashion.

2. Build stakeholder capacity.

- Develop the skills base for the transition and build capacity within all stakeholders to host meaningful and inclusive engagement, and enable them to benefit from the transition.

3. Establish transparent information systems.

- Establish a robust and extensive information system – a ‘one-stop shop’ – on the socio-economic and environmental dynamics of the transition.
- Design suitable tools and platforms for knowledge-sharing and the co-development of policy by government, the private sector, labour, communities, and civil society.

4. Commit to social dialogue.

- Commit to fostering long-term inclusive, continuous, inter-stakeholder dialogue on the vision and management of a just transition, between government and social partners, as well as within government.

5. Improve policy coherence and consistency.

- Prioritise the double mainstreaming of sustainability into socio-economic policy and socio-economic considerations into environmental policy, with a focus on operationalising existing policies and improving their coherence and coordination.

Chapter 3

Sustainable Finance for the Green Economy

About this Chapter

Chapter 3 reviews best practices for sustainable finance (from both an enabling environment and market mechanism perspective) to support a transition to an inclusive green economy. The chapter further elaborates

upon potential risks and barriers to sustainable finance and concludes with recommendations for strengthening and unlocking more sustainable financing options in South Africa.

3.1 The Global Perspective

The global transition to a more sustainable and inclusive global economy comes with a significant price tag:

- An estimated US\$2.5 trillion (R40 trillion) is required to meet the Sustainable Development Goals (SDGs) and US\$13.5 trillion (R216 trillion) to implement the Paris Agreement (UNCTAD, 2014; IEA, 2015).
- These equate to between 7% and 10% of annual global GDP or 25% to 40% of annual global investment (Zenizeni Sustainable Finance, 2019).

While these are separate price tags, there might be overlap across certain goals, such as climate change mitigation and adaptation. Nevertheless, funding the transition will need to draw on both public and private sources of finance; redirect finances away from harmful investments, such as fossil fuel subsidies; and develop and implement new, innovative financing models. Understanding how to 'unlock' such significant funding is, therefore, central to the green transition.

“Sustainable finance is not only about increasing investments through new funding streams but also about finding ways to reorient the world’s existing financing streams to be consistent with multiple SDGs at once, that is, to advance some goals without detracting from others” (Kharas & McArthur, 2016).

There are several other noteworthy sustainable financing initiatives that make up a crucial part of the global perspective, which are summarised in Table 3.1 (Kharas & McArthur, 2016).

3.2 The South African Perspective

The National Treasury recently released *Financing a Sustainable Economy Technical Paper* (draft), which was shared for public comment in June 2020 (NT, 2020a; NT, 2020b). The draft technical paper signals that the financial sector recognises its role in supporting the transition to an inclusive green economy, and that there is a need for a framework to measure, manage, and report on sustainable finance initiatives in South Africa (NT, 2020a).

The aim of the draft technical paper is to support stakeholders to better understand environmental and social risks from climate change, pollution, resource depletion, and environmental degradation, and the financial sector’s vulnerability to them (NT, 2020a). In its current form, it does not cover the full scope of sustainable finance mechanisms, sustainable public sector finance, or broader environmental, social and governance (ESG) issues, such as the environmental

Table 3.1: Summary of Global Green Financing Initiatives

Green financing initiative	Description
Principles for responsible investment	Six principles which aim to incorporate environmental, social, and governance (ESG) standards into investment practices across 1 500 corporate signatories with more than US\$60 trillion in assets under management (PRI, 2020).
UN Global Compact	World's largest corporate sustainability initiative – it assists 11 000 companies to integrate ESG issues into their business practices. It also launched the Global Compact 100 Index of responsible companies (UNGC, n.d.).
Task Force on Climate-related Financial Disclosures (TCFD)	Established in 2015 by the Financial Stability Board, it develops consistent climate-related finance disclosure guidelines for companies, banks, and investors (UNEP FI, n.d.). A Task Force for Nature-related Financing Disclosure is also being developed.
Global Reporting Initiative (GRI)	It promotes sustainability disclosures around the world by assisting companies and governments to understand and communicate their impact on sustainability issues, such as climate change, human rights, social well-being, and governance (GRI, n.d.).
Equator Principles (EPs)	It provides a risk management framework for more than 80 financial institutions to determine, assess, and manage ESG risks in developmental projects (EP, 2020).
Sustainable Stock Exchanges (SSE) Initiative	A UN Partnerships Programme which offers a global platform for 48 exchanges from 52 countries to explore how best to advance ESG performance (SSE, 2019).
Sustainability Accounting Standards Board (SASB)	It establishes sustainability accounting and disclosure standards for ESG-related topics (SASB, 2018).
International Integrated Reporting Council (IIRC)	It provides an integrated reporting framework for aligning capital allocation and corporate activities for sustainable development across the financial sector (IIRC, n.d.).
CDP Worldwide (formerly Carbon Disclosure Project – CDP)	It supports over 800 investors, companies, and cities to identify and take action on environmental risks for a sustainable economy (CDP Worldwide, 2020).
Carbon Pricing Leadership Coalition (CPLC)	It aims to catalyse action towards successful implementation of carbon pricing around the world, and works with over 100 companies and stakeholders to advance global carbon pricing efforts (CPLC, 2018).
Portfolio Decarbonisation Coalition (PDC)	It supports financial institutions to withdraw capital from carbon-intensive companies, and currently works with 32 major investors with over US\$800 billion (R12.8 trillion) in decarbonisation commitments (PDC, n.d.).
Focusing Capital on the Long-Term (FCLT)	It encourages a long-term focus in the global investing market to overcome short-term behaviours and to promote longer-term economic progress across generations (FCLT Global, 2020).
International Development Finance Club (IDFC)	It establishes guidelines for monitoring and encouraging development banks to finance the implementation of the SDGs and Paris Agreement agenda (IDFC, 2019).
Scaling-up Climate Finance through the Financial Sector (30 by 30 Zero)	It aims to harness the financial sector in targeted countries to considerably scale-up private sector financing for climate mitigation and adaptation projects in line with Nationally Determined Contribution (NDC) targets (IFC, 2021).

(Source: Adapted from Kharas & McArthur, 2016.)

risks associated with biodiversity loss. The technical paper is expected to address the broader ESG risks in subsequent phases.

Despite its limitations, the technical paper represents a critical first step in developing a comprehensive approach to sustainable finance in South Africa. It seeks to provide an enabling environment by harmonising

and aligning definitions, disclosure standards, and governance approaches for effectively identifying, quantifying, and managing environmental and social risks (NT, 2020a).

There are several other sustainable finance initiatives that make up a crucial part of the South African finance landscape, which are summarised in Table 3.2.

3.3 Best Practice: Creating an Enabling Environment for Green Finance

There are two main priority areas when it comes to best practice for unlocking green finance opportunities (globally and in South Africa) – access to new and emerging markets; and improved risk management in buying down risk to enable investment (Zenizeni Sustainable Finance, 2019). Both are important contributing factors for long-term sustainability in the financial sector and both have new opportunities to promote green finance through the enabling environment and market practices (Zenizeni Sustainable Finance, 2019).

Creating an enabling environment for green finance will support stakeholders and actors to unlock and utilise green finance to support the transition (Zenizeni Sustainable Finance, 2019). Institutional frameworks that support an enabling environment for green finance include policy instruments, regulations and standards, labelling, disclosures, mandatory targets, information-sharing platforms, and enforcement mechanisms, such as fines (UNDESA, 2012; Zenizeni Sustainable Finance, 2019). South Africa has many of these in place.

3.3.1 Sustainable Fiscal Policy

Fiscal policy provides institutional framing for sustainable finance through incentive schemes, taxes, and public spending (Zenizeni Sustainable Finance, 2019). Environmental taxes, such as the carbon tax, form part of a larger group of fiscal policy instruments, referred to as market-based or pricing instruments, which also include carbon pricing mechanism, such as

the EU Emissions Trading Scheme (EU-ETS) (European Commission, 2020), and trading mechanisms, such as the Clean Development Mechanism (CDM) of the Kyoto Protocol (UNCC, 2020). Revenue generated from these market-based mechanisms can be used to finance sustainable actions, such as renewable energy infrastructure investments or energy-efficiency programmes.

Fiscal policy can also provide incentives to encourage more sustainable economic activities and behaviour through low-interest rate loans, tax exemptions, and micro-finance for such sustainable activities (Zenizeni Sustainable Finance, 2019). For example, South Africa's Carbon Tax Act provides entities with a 'performance allowance' – a tax exemption for being an industry leader and setting the standard for best practice with regards to greenhouse gas (GHG) mitigation (RSA, 2019).

Direct support in the form of subsidies and feed-in tariffs are also important for financing the green transition and can be funded (or redirected) by environmental tax revenues. South Africa provided subsidies for solar water heater (SWH) instalments as part of the goal to install 1 million SWHs and reduce emissions from coal-powered electricity (NT, 2014; Zenizeni Sustainable Finance, 2019). Green finance can also be sourced or redirected from harmful subsidies, such as fossil fuels subsidies. However, political will is a critical factor for redirecting harmful subsidies and can be influenced by fiscal pressure and a well-informed public (World Bank, 2017).

Table 3.2: Sustainable Finance Initiatives in South Africa

Sustainable finance initiatives	Description
Green Outcomes Fund	A blended-finance vehicle and green financial solution that supports green micro-, small- and medium-sized enterprises (MSMEs) and green investment funds by funding environmental outcomes around climate, water, waste, and green jobs (WWF-SA, 2020a).
Prescient Living Planet Fund	It provides long-term investors with acceptable financial returns within a framework that enhances environmental sustainability, by redirecting investment flows towards sustainable opportunities and away from unsustainable practices (WWF-SA, 2020b).
WWF-SA and Six Capitals ESG Advisory Partnership	It provides vital assistance to South African investment industry stakeholders in assessing environmental risks and transitioning towards long-term environmental sustainability (WWF-SA, n.d.).
Sustainable Landscape Finance Coalition	It brings together an extensive community of experts and stakeholders to drive the development of finance solutions for effective and enduring conservation in South Africa (WWF-SA, n.d.).
Climate Innovation Centre South Africa (CICSA)	It provides business development support to start-ups in the South African green economy, in collaboration with the World Bank's InfoDev and the Development Bank of Southern Africa's (DBSA) Green Fund (The Innovation Hub, n.d.).
National Green Fund	Established in 2012 under the then Department of Environmental Affairs; and managed by the DBSA, it provides grant and loan instruments to buy down risk; encourage private sector investment in low-carbon economy initiatives; support research and development and capacity-development initiatives.
'Driving Force for Change' Youth Pilot Initiative	It provides support to enable youth to become that 'Driving Force for Change' and develop and lead environmental initiatives that put South Africa on a low-carbon and climate-resilient development pathway (DFFE, 2020).
National Treasury's Financing a Sustainable Economy Technical Paper	It outlines the research and resultant recommendations of a process to establish minimum practice and standards regarding climate change and emerging environmental and social risks. It looks at the approach of international financial regulators and the work of local financial institutions (NT, 2020b). There is also a green finance taxonomy under development in South Africa.

Financial frameworks, such as the European Banking Federation's Green Finance Framework (EBF, 2017) and the UNDP's Development Finance Assessment Framework (UNDP, 2017), have been identified as key knowledge and experience-based responses for managing and unlocking private and public sector finance (UNDESA, 2012; Zenizeni Sustainable Finance, 2019).

3.3.2 International and National Standards

International and national standards also form part of the sustainable institutional framework to support a green and inclusive transition. Understanding that the financial sector can be perverse, in that harmful activities in the real economy can generate positive returns in the financial economy, means that the financial sector battles to differentiate between its customers on issues related to sustainability (Zenizeni Sustainable Finance, 2019). For example, mining and extractives sector companies are extremely damaging to the environment and create significant external costs (Arp & Keen, 2020), but also form an important part of financial institutions' client base in several countries, including South Africa.

In an effort to combat this trend and improve the governance of such companies, initiatives such as the Extractives Industries Transparency Initiative (EITI) were established and signed onto by several countries (EITI, 2010). EITI sets standards for improving the governance of the oil, gas, and mining sectors, and has helped inform due diligence standards of international finance institutions, such as the International Finance Corporation (IFC) and private sector initiatives like the Equator Principles¹² (EITI, 2010; Zenizeni Sustainable Finance, 2019).

South Africa's financial sector has been relatively proactive in this regard, with the voluntary adaptation of several financial sector sustainability standards, such as the Code for Responsible Investing in South Africa (CRISA) and the Equator Principles. To date, the largest pension funds and asset owners have adopted CRISA, and four commercial banks are members of the Equator Principles Association (Zenizeni Sustainable Finance, 2019).

South Africa is also a member of the IFCs Sustainable Banking Network and established the Sustainable Finance Initiative to foster collaboration between financial sector regulators and industry associations. Some progress has been made to integrate issues of sustainability and inclusion. The Financial Sector Conduct Authority, and the Prudential Authority, are examples of ensuring consistency and coherence

across enabling policies and regulations. A centralised information platform where such regulation can be accessed is also required.

3.3.3 Inclusive Finance

Social inclusion is a critical aspect of the green economy and a just transition (Zenizeni Sustainable Finance, 2019). To overcome challenges associated with financing social inclusion and protection schemes, the Alliance for Financial Inclusion established a number of multilateral financial inclusion frameworks. Some of these include, amongst others, the *Maya Declaration on Financial Inclusion* (AFI, 2020a), the *Sharm El Sheik Accord on Financial Inclusion, Climate Change and Green Finance* (AFI, 2020b), and the *Denarua Action Plan* (AFI, 2016). They each seek to implement financial inclusion policy solutions, such as providing women with access to quality and affordable financial services while also promoting positive environmental and climate resilience outcomes (AFI, 2016; AFI, 2020a; AFI, 2020b; Zenizeni Sustainable Finance, 2019).

Establishing partnerships for collaboration is another important aspect in the institutional framework for supporting inclusive and green finance and is the cornerstone of SDG 17. The IFC's Sustainable Banking Network (SBN) is one such example of multilateral finance partnerships across several countries, including South Africa, that aims to advance sustainable finance in line with global best practices (IFC, 2020).

In 2014 the World Bank established the **Energy Sector Management Assistance Programme (ESMAP)** to support countries to reduce harmful energy subsidies, amongst other objectives (ESMAP, 2020).

¹² The Equator Principles set environmental, social and governance (ESG) standards for lending to high-impact companies and activities, such as mining.

3.4 Best Practice: Market Mechanisms

Market practices play a key role in unlocking green finance and are identified as a second pillar (next to the enabling environment) for promoting long-term environmental sustainability and inclusiveness in the financial sector (Zenizeni Sustainable Finance, 2019). The following section provides a high-level overview of green finance products and services from both the public and private financial sectors.

3.4.1 Dedicated Green Funds

Dedicated green funds are financial mechanisms that invest solely in green economy projects and initiatives, such as renewable energy; sustainable consumption and production; water resources; sustainable transport; and natural capital/ecological infrastructure (UNDESA, 2012; Zenizeni Sustainable Finance, 2019). There are various examples of dedicated green funds, such as the *Maurice Île durable* fund in Mauritius and the South African Green Fund. The latter is funded solely by the South African government, and in 2017 managed to leverage R90 million in additional investments (DEA, 2016). However, given the fact that these dedicated green funds are generally funded through public finance, their long-term sustainability is limited due to fiscal constraints (Zenizeni Sustainable Finance, 2019).

3.4.2 Ethical and Green Banks

Ethical banks are governed by ethical principles and only invest in ethical and sustainable activities. Ethical banks have been found to increase social welfare and mobilise greater local currency funding, as they ultimately match ethical lenders with motivated borrowers, reducing inefficiency caused by the agency issue (Barigozzi & Tedeschi, 2015; Zenizeni Sustainable Finance, 2019).

Green banks, on the other hand, are dedicated to green investments that fill climate change and other environmental investment gaps (Coalition for Green Capital, 2017). While green banks are common in

developed countries, such as the Connecticut and New York Green Banks in the USA, they are beginning to emerge in developing countries, such as in Chile, India, Morocco, and South Africa (UNDESA, 2012; Zenizeni Sustainable Finance, 2019).

3.4.3 Natural Capital Investment

Investments in natural capital and ecological infrastructure are critical for achieving the SDGs, natural resource security, and climate change mitigation, adaptation, and resilience. These kinds of natural capital investments include payment for ecosystem services (PES), direct rehabilitation and management of critical ecosystems, and investment in protected areas (UNDESA, 2012; Zenizeni Sustainable Finance, 2019).

The Seychelles entered into the first-ever payment for marine conservation debt restructuring¹³ with its Paris Club debtors¹⁴ and the Nature Conservancy (The Paris Club, n.d.). The island state's debt was restructured to allow for an inflow of grants, and investment capital was used for marine and coastal ecosystem rehabilitation and management, and climate change adaptation (Convergence, 2017).

3.4.4 Investment in Sustainable Agriculture

The significance of the agricultural sector is often overlooked, both in terms of its environmental impact and its climate risk (Zenizeni Sustainable Finance, 2019). Ensuring that finances are available to support the sustainable and inclusive transition in the agricultural sector (or sustainable agriculture) is equally critical.

There are a wide variety of financial mechanisms available to promote and support sustainable agriculture, and many of them address risks across the entire value chain (Zenizeni Sustainable Finance, 2019). Covering crops with shade netting to reduce evapotranspiration, improving efficient water-use (including the clearing of

¹³ Debt restructuring in support of environmental sustainability targets is a target indicator under SDG 17 (Zenizeni Sustainable Finance, 2019).

¹⁴ The Paris Club is an informal group of official creditors whose role is to find coordinated and sustainable solutions to the payment difficulties experienced by debtor countries (The Paris Club, n.d.).

alien invasive species), and insurance (which is often expensive and therefore can be exclusionary), are examples of the various support mechanisms for which farmers need financial assistance (UNDESA, 2012; Zenizeni Sustainable Finance, 2019).

3.4.5 Investment in Human Capital

Green finance also needs to support human capital development for a transition to a green economy and the Fourth Industrial Revolution. Educating, skilling, and reskilling workers who are employed in carbon-intensive industries is critical for achieving a just transition. Priority must be given to those most at risk from a transition away from carbon-intensive industries (Zenizeni Sustainable Finance, 2019).

In South Africa, an accountability framework for sustainable investments is being developed in a partnership consisting of the Congress of South African Trade Unions (COSATU); the Federation of Unions of South Africa (FEDUSA); the South African Congress of Trade Unions (SACTU); Sanlam; and the Association of Savings and Investment South Africa (ASISA) (Zenizeni Sustainable Finance, 2019). The ASISA Foundation offers training in financial literacy and education for labour representatives of retirement fund trustees. This includes training on the use of retirement funds for addressing environmental, social, and governance (ESG) issues (ASISA, n.d.).

3.4.6 Investment in Green Infrastructure

Physical infrastructure for transport, energy, waste, water, and information communication technology (ICT) are critical for any modern economy, but have significant environmental footprints. The *Green Infrastructure Finance: Framework Report* (World Bank, 2012) estimated that an additional US\$80 billion (R1.28 trillion) a year is required for green infrastructure projects in the East Asia and Pacific (EAP) region alone. Infrastructure sectors, therefore, also need to transition to a more sustainable model (UNDESA, 2012; Zenizeni Sustainable Finance, 2019).

Sustainable bonds, including green, water, diaspora, and climate bonds, offer a good financing mechanism (Gulati, 2018; Zenizeni Sustainable Finance, 2019). According to the Climate Bonds Initiative (CBI, 2020) approximately US\$94 billion (R1.5 trillion) worth of green bonds¹⁵ were issued in 2020, worldwide.

3.4.7 Innovation and Information Investments

Investment in innovation, research and development in technology, and in methodologies and approaches for a sustainable transition is critical, and finance to support such innovations is equally important (UNDESA, 2012; Zenizeni Sustainable Finance, 2019). The Global Innovation Lab for Climate Finance is one such finance mechanism supporting innovation, where US\$2 billion (R32 billion) has been raised for innovative, shovel-ready climate investments in India, Brazil, and Southern Africa (The Lab, 2020).

Information for, and transparency of, sustainable finance is also critical. In the finance sector, initiatives like the TCFD, the Asset Owners Disclosure Project (AODP), and the Equator Principles, aim to provide transparent information on sustainable finances to support accountability and good governance. They also set standards for sustainable finance and provide independent oversight thereof (UNDESA, 2012; Zenizeni Sustainable Finance, 2019).

3.4.8 Credit Enhancement and De-risking Investments

The private sector can often be reluctant to invest in sustainable projects due to a number of factors, such as high perceived risk, policy uncertainty, and extended tenors. Government, therefore, has an important role to play in enhancing credit and de-risking sustainable investments, particularly in the energy and agricultural sectors (UNDESA, 2012; Zenizeni Sustainable Finance, 2019).

¹⁵ This measure is only for green bonds that are aligned with the CBI definitions of green bonds, and a taxonomy thereof is available at: <https://www.climatebonds.net/standard/taxonomy>.

For example:

- Public capital can be used to provide credit enhancements and attract private capital to sustainable investments, thereby mitigating the perceived risk and reluctance of the private sector to make such investments.
- Government-owned development finance institutions (DFIs), such as development banks, are key providers of credit-enhancement and partially de-risking investments for the private sector.
- Further de-risking efforts by DFIs can take on different forms, from the provision of long-term grants and concessionary funding to direct investments into sustainable projects (UNDESA, 2012; Zenizeni Sustainable Finance, 2019).

3.4.9 Umbrella Facilities and Co-investments

Some countries have difficulty in sourcing international finance for investments, not necessarily because they are 'bad' investments, but mainly due to the size of such investments. Smaller investments, such as lending to MSMEs, lead to higher transaction costs per US dollar spent and can deter foreign investment (Zenizeni Sustainable Finance, 2019). To overcome this challenge,

foreign investors can provide an umbrella facility to local financial institutions, which can then on-lend to smaller entities and projects.

Co-investment for larger projects can be triggered by DFIs or green banks by providing a minimum financing amount necessary to make the total investment viable for the private sector. This will subsequently encourage the private sector to finance the outstanding amount, which is an important approach for using public finance to leverage private finance (UNDESA, 2012; Zenizeni Sustainable Finance, 2019).

3.4.10 Project Support for Bankability

A challenge that many projects encounter, is that they seldom reach a stage wherein they become bankable (Zenizeni Sustainable Finance, 2019). To overcome this challenge, it is critical that all the technical information supporting the project is robust and descriptive on issues of sustainability. Specialised funds and DFIs generally provide such assistance, using dedicated project preparation funds, such as the New Partnerships for Africa's Development Infrastructure Project Preparation Facility (NEPAD-IPPF) (ADB, 2020).

3.5 Barriers and Risks for Green Finance in South Africa

3.5.1 Weak Enabling Environment for Sustainable Finance

There is a gap in the enabling environment for the South African financial system, in that there is limited policy that encourages and promotes sustainable finance or the prioritisation of ESG considerations in investment decisions. While there are various international voluntary initiatives that aim to provide such an enabling environment, there is a domestic policy gap in this regard (Gulati et al., 2018). In an attempt to close this gap, the National Treasury has developed a draft *Financing a Sustainable Economy Technical Paper* (under review) and is developing a Green Finance Taxonomy for South Africa.

Most sustainable finance mechanisms in South Africa are also limited in that they tend to focus on debt financing for green technologies, and overlook equity and capital support opportunities elsewhere in the green economy (NBI, 2013; Zikhali et al., 2016). This limits the ability of businesses to leverage financial support for sustainable activities or investments in the green economy (Zikhali et al., 2016; Gulati et al., 2018).

3.5.2 Economic Barriers

Several sustainable finance barriers are simply linked to features of the broader South African economy (Gulati et al., 2018). For example, current lending patterns, relatively high pre-COVID-19 interest rates, and a broader lack of access to credit facilities for many individuals



and small businesses restrict investment in any activity. These barriers are further exacerbated when attempting to secure finances for green and sustainable activities (NBI, 2013; Zikhali et al., 2016). General market failures have also contributed to systematic bias in the financial sector's assessment of green and sustainable investment opportunities (Naidoo & Goldstuck, 2016). However, recent interest rate cuts due to the financial impacts of COVID-19 might encourage more businesses to take on debt if they can balance the risk of potential poor returns and increasing interest rates in the medium-term.

3.5.3 Specific Characteristics of Green Projects and Activities

Economic barriers are exacerbated by certain characteristics of green activities, projects, and technologies (Gulati et al., 2018). Most have not yet achieved economies of scale and involve relatively higher upfront investments and expenditure when compared to brown and/or traditional investments. Others may lack commercial viability despite having lower life cycle costs relative to brown alternatives. Lack of awareness,

track records, and familiarity with green technologies and activities, may also add to the uncertainty and hence the perceived risk associated with sustainable projects, technologies, and business models, further limiting finance (Gulati et al., 2018).

According to Naidoo and Goldstuck (2016), asymmetric information¹⁶ and underestimating environmental risks is a significant contributor to such a financial barrier. Mainstreaming environmental and social considerations into investing and lending activities is about questioning the nature of returns and shifting mindsets away from maximising short-term profits towards longer-term sustainable value (Naidoo & Goldstuck, 2016).

3.5.4 Lack of Dedicated Funding

The absence of venture capital, coupled with the unwillingness of commercial banks and private equity firms to take on risks associated with new technologies and business models, implies that there is a lack of dedicated funding for the commercialisation and scaling-up of green technologies (Gulati et al., 2018). Technologies that do become commercially viable also

16 Asymmetric information refers to a situation where the buyer has more information or material knowledge than the seller, or vice versa.

have to compete with brown alternatives for a limited pool of investment capital.

There is also a disconnect between new technology funding needs and investment policies or funding rules of commercial funding institutions, which are often designed to support more conventional projects. Green technologies can also be capital-intensive, making them less attractive investments based on appraisal criteria, including payback periods in the short-term, coupled with their risk-return profile (NBI, 2013; Gulati et al., 2018).

3.5.5 Lack of Bankable Projects

Finance institutions have argued that there is a lack of bankable green and sustainable projects and suggest that this presents the single biggest barrier to the green economy (Naidoo & Goldstuck, 2016). There are too few 'good-quality' projects that have acceptable risk-return profiles and manageable transaction costs, which speaks to the earlier-mentioned barrier regarding a lack of dedicated green funding options.

3.5.6 The Energy Sector Focus

The majority of private equity funds have targeted low-carbon projects and therefore indirectly create a focus on the energy sector, concentrating funds in that direction (Montmasson-Clair, 2013). Green economy policies skewed towards low-carbon energy also cause most of the sustainable finance to move towards the energy sector (Gulati et al., 2018). In addition, the energy sector has a proven track record, which lowers the risk profile of the 'new' green technology.

However, while the water, waste, and low-carbon industrial development sectors have received some financial support (Montmasson-Clair, 2013), other sectors, such as agriculture and natural resources, have seen little financial support. Low levels of interest from project developers in these sectors are highlighted as another barrier to finance (NBI, 2013; Gulati et al., 2018). Invariably, more needs to be done in understanding why such low levels of appetite exists in these sectors.

3.6 Signs of Supporting Green Finance in South Africa

As discussed, there are many opportunities for green finance designed to support the transition to an inclusive green economy and to achieve the SDGs. Recommendations to realise these have been made earlier, and are briefly reprised here. Some South African examples follow, but these are by no means exhaustive. Sustainability aspects are already included in many finance vehicles and measures in the country, creating an entry point for stronger green economy criteria and focuses.

3.6.1 Strengthen the Enabling Environment for Unlocking Green Finance

Governments can foster green finance using supportive strategies, such as green fiscal reform; supportive institutional frameworks and policies for green and inclusive finance; and information availability through a centralised green finance information platform.

National Treasury first put out a draft *Financing a Sustainable Economy Technical Paper* in 2010, developed in consultation with the Department of Forestry, Fisheries and the Environment, industry associations and regulators. The paper includes recommendations for the finance industry and the financial regulators, disclosures, stress testing and building capacity, and developing a green finance taxonomy. Subsequently, fiscal reforms have been pursued, and a revised draft Technical Paper was released in 2020 (NT, 2020b). As at June 2021, the Draft Green Finance Taxonomy Working Draft Version 1.5 was released (NT, 2021).

3.6.2 Implement Market Strategies for Mobilising Private Finance

Market-based strategies for unlocking and redirecting green finance include dedicated green funds; ethical green banks; credit-enhancing and de-risking strategies by FDIs; co-investments for large projects to encourage private sector investment; and umbrella facilities for local financial institutions to support smaller projects and MSMEs. With such strategies in place, investment can be channelled into green innovation, R&D, sustainable agriculture, human and natural capital, and ecological infrastructure, and into establishing project preparation and bankability support facilities.

South Africa's state-owned Industrial Development Corporation (IDC) first issued a green bond in 2012 to finance clean energy projects. As at August 2021, the IDC; DBSA; Cities of Cape Town and Johannesburg; private banks, Nedbank, First Rand Bank, Standard Bank SA and ABSA; and companies, GrowthPoint Properties and Redstone Solar Thermal Power Plant, had issued green bonds (Boulle, 2021).

Blended finance and co-investment is facilitated by a regulatory framework for public-private partnerships (Treasury Regulation 16 of the Public Finance Management Act 1 of 1999 and Section 120 of the Municipal Finance Management Act 56 of 2003, plus government's Private Sector Participation Framework adopted in 2016), and enacted, for example by the Infrastructure Fund. Sustainability aspects are already included, enabling a stronger green economy filter.

Several South African DFIs have economic empowerment as their mandate, for example: South African Microfinance Apex Fund for survivalist micro and small businesses; Micro Agriculture Finance Scheme of South Africa for the poor; Khula Enterprise Finance for small and medium enterprises; and National Empowerment Fund for broad-based black economic empowerment. These can be 'greened' to a greater extent.

3.6.3 Establish and Enforce Financing Accountability Frameworks

Initiatives to ensure transparency, accountability, due diligence, and good governance on sustainability in the finance sector include the TCFD; GRI; CDP Worldwide; King III and King IV; AODP; Equator Principles; EITI for finance in the extractives industry; CRISA; and IFC. Financing accountability frameworks also encourage financial institutions to prioritise ESG-related matters in their risk and financial decision-making processes.

National Treasury's *Financing a Sustainable Economy Technical Paper* recommends companies' disclosure of climate-related risks and opportunities using the TCFD framework, and many players are driving uptake of this.

3.6.4 Central Bank Regulations Play a Key Role

Regulatory interventions by central banks that reduce information asymmetries and encourage financial institutions to prioritise ESG factors into their risk and decision-making processes, will also help to unlock green finance. Starting with a voluntary approach may be useful for countries that have not yet integrated green finance into central bank regulations.

The South African Reserve Bank has made commitments in this regard through joining the Network of Central Banks and Supervisors for Greening the Financial System.

3.6.5 Green and Sustainable Funds

Sustainable green funds can redirect government funding toward a sustainable and inclusive transition. They can be structured so as to invite private sector co-funding.

The national Green Fund, managed by the DBSA, aims to provide catalytic finance to facilitate investment in green initiatives that will support poverty reduction and job creation.

3.6.6 Finance Partnerships are Important

Unlocking green finance will most likely come from multi-stakeholder initiatives, particularly public-private partnerships. Multilateral and national-level frameworks are necessary for ensuring transparency and accountability, and that those partnerships are fit for purpose. Blended-finance platforms and sustainability accounting standards are some of the tools available for implementing such frameworks.

3.6.7 Learn from the Renewable Energy Independent Power Producers Procurement Programme (REIPPPP)

Five strategies for unlocking green finance are demonstrated by the South African REIPPPP, which

attracted private and foreign investment:

- Sustainable public procurement of renewable energy;
- Policy certainty and incentives, such as the inclusion of renewable energy in the Integrated Resource Plan and the renewable energy bidding process;
- Co-financing from international finance institutions;
- De-risking investments through public sector guarantees to attract private finance; and
- A programmatic approach that justifies transaction costs, which tend to be higher for once-off investments.

Perhaps similar approaches in other sectors, such as agriculture, transport, and physical infrastructure, might mobilise finance for greening those sectors.

Key Takeaways

1. Create a sustainable environment for green finance.

- Involve all financial policies, programmes, products, and services that support the transition of institutions, systems, and economies to an inclusive and sustainable development pathway.

2. Consider the estimated price tags.

- An estimated US\$2.5 trillion (R40 trillion) is needed to meet the SDGs (globally), while the Paris Agreement is estimated to require US\$13.5 trillion (R216 trillion). These will require both new, innovative sources of finance and the redirection of financial flows away from unsustainable investments, such as brownfield investments.

3. Promote green and sustainable finance best practice.

- Include strategies, such as sustainable/green fiscal policy, developing and/or adhering to international and national standards, sustainable public procurement, and inclusive finance.

4. Adopt enabling strategies for unlocking green finance.

- Include sustainable public procurement; social transfers; standards setting; integrated planning; accounting for external costs; provision of incentives; and fiscal reform.
- Ensure collaboration between government, the private sector, and civil society.
- Establish mandatory ESG accountability frameworks for the financial sector.

5. Create market strategies for unlocking green finance.

- Create dedicated green funds; natural and human capital investment; sustainable agriculture; clean and sustainable infrastructure; clean research and development; information management; co-investment and umbrella facilities; and de-risking investments and credit enhancement.

6. Political will is a critical success factor.

- Political leadership is required for providing incentives to support the redirection of finances away from harmful subsidies and internalising external costs of unsustainable investments.



Photo: Jordan Milton. Noluvuyo Sixholo of Wildtrust.



Chapter 4

Closing the Loop on Sustainable Consumption and Production for a Circular Economy

About this Chapter

Chapter 4 discusses sustainable consumption and production (SCP) practices and the circular economy model. The chapter provides an overview of global perspectives and best practices, and reflects on the South African perspective prior to investigating the

application of SCP in selected economic sectors. The chapter concludes by highlighting potential challenges and barriers and puts forward recommendations to overcome them.

PRINCIPLES OF THE CIRCULAR ECONOMY MODEL

In advancing SCP patterns, the circular economy model takes this concept one step further by closing the loop between production, consumption, and waste, for further value addition. The circular economy model is defined by the Ellen MacArthur Foundation (EMF) as a “*framework for an economy that is restorative and regenerative by design*” (EMF, 2017). The restorative and regenerative concepts that underpin the circular economy model are based on the functioning of nature, which is itself circular.

The circular economy model aims to limit the use of new or virgin resources, minimise waste, and account for all material flows within a system, to counter the linear consumption and production model (EMF, 2017; McCarthy et al., 2018; de Kock et al., 2020). It does so by re-designing and re-engineering the system and its components, so that raw materials are used more efficiently, and waste is prevented, eliminated, minimised, or modified to become a secondary resource that can be used again as a supplementary raw material in production. Creating and expanding a secondary resource market provides some degree of import substitution benefits, in that it reduces the demand for virgin material imports, depending on the respective raw materials and finished goods a particular country imports or exports (McCarthy et al., 2018).

Circular economy principles aim to enhance the value of natural capital by improving natural resource-use efficiency and avoiding unnecessary waste and pollution. Promoting secondary resource-use and sustainable production practices, the

circular economy can also reduce the carbon intensity of the system and support climate change mitigation, adaptation, and resilience efforts (EMF, 2017; McCarthy et al., 2018; de Kock et al., 2020). Transitioning to a circular economy model is critical for deep emissions reductions and for transitioning to a sustainable and inclusive economy (EMF, 2019).

Transitioning to circular production models can also generate various socio-economic benefits, such as cost savings and job creation in the waste economy and new secondary resource markets, which can support unemployment, poverty, and inequality reduction. According to the ILO (2018), between 45 and 50 million jobs could be created globally in the services and waste management sectors respectively, in transitioning to a circular economy model. These job creation opportunities provide a critical buffer against employment impacts of the transition away from unsustainable and carbon-intensive industries.

However, the circular economy model is not without its limitations (Jouni Korhonen et al., 2018). While various socio-economic barriers might exist, such as systemic limitations related to collection, the physical scale of the economy, social and cultural perceptions of waste and governance, and management of waste, there are also physical barriers (Jouni Korhonen et al., 2018). Thermodynamic limitations mean that cyclical systems will always consume resources and create waste and emissions. Different calorific values of waste will have differing impacts on secondary product consistency and quality. Simply put, it is close to impossible to continually recycle something back into a new secondary product without some level of virgin material requirement (Jouni Korhonen et al., 2018).

4.1 Sustainable Consumption, Production, and the Circular Economy

Sustainable consumption and production (SCP) was first put on the map by Agenda 21 during the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil in 1992 (UNSD, 1992). Agenda 21 identified unsustainable production practices and consumption behaviour as key drivers of environmental degradation around the world, and set out a clear plan of action to reduce these impacts and improve the sustainability of consumption and production behaviours (UNSD, 1992; Schafer et al., 2011).

The objective of SCP is to minimise the environmental impacts of consumption and production behaviour and to support socio-economic development within the carrying capacity of the global environment (UNEP, 2015; UNECA, 2018; Ntulie & Semelane, 2019). Improving SCP is critical for decoupling economic growth from environmental degradation and natural resource depletion. It is the efficient use of natural resources and the minimisation of waste to meet society's needs, without depleting the

planet's finite resources, and conserving them for the benefit of future generations (UNEP, 2015; UNECA, 2018; Ntulie & Semelane, 2019).

Like the broader green transition, SCP must seek to address socio-economic sustainability in addition to environmental sustainability (UNEP, 2015; UNECA, 2018; Ntulie & Semelane, 2019). Social factors include human rights and gender dynamics; inclusion and equity; safety and security; and decent employment. Economic factors include the cost of goods and services, including secondary resources (discussed below); cost of collecting, reusing, and/or recycling materials; and internalising negative external costs from consumption and production (Ntulie & Semelane, 2019). SCP is regarded as a cross-cutting element of the green and inclusive transition to a sustainable economy, because it cuts across energy, agriculture, manufacturing and construction, and extractive industries, and the water and waste sectors.



4.2 The Global Perspective

There are various global initiatives that aim to support SCP, including Agenda 21 (UNSD, 1992) as previously discussed (Ntulie & Semelane, 2019). Expanding on Agenda 21, the Johannesburg Plan of Implementation (JPOI) was adopted at the World Summit on Sustainable Development in 2002, which set out an implementation plan for pursuing sustainable socio-economic development (UNDESA, 2005; Ntulie & Semelane, 2019).

In 2012, at the Rio+20 Conference, the Global 10 Year Framework Programmes (10YFP) on SCP was adopted. The 10YFP provides countries with methodologies and tools for developing national and local action plans for SCP (UNDESA, 2014). In 2015, the 2030 Agenda for Sustainable Development and the 17 SDGs were adopted (UN, 2015; Ntulie & Semelane, 2019).

Achieving SDG 12 requires a clear policy framework, with detailed national and regional plans that promote sustainable livelihoods, efficient resource-utilisation, and effective waste and pollution control. Akenji and Bengtsson (2014) argue that SCP policy frameworks can either be integrated into existing policy structures or implemented as their own standalone policies or goals. There is no right or wrong approach in this regard, but rather, policy frameworks need to be designed to suit the particular country context. Within the South African context, integrating SCP practices into existing policy frameworks could be the preferred option, given the lengthy timeframes, governance, and oversight process involved in new policy development.

PAGE member countries have actively developed and implemented a variety of policy frameworks, initiatives, and projects that promote SCP. Some of these initiatives are highlighted in Table 4.1.

In some African countries, such as Ghana, Burkina Faso, and Mauritius, SCP policies and programmes are in line with the 10YFP and targeted at key national sectors with high environmental impacts and energy consumption. These programmes have been integrated into existing policies and communicated widely to foster awareness and collaboration for long-term success (Ntulie & Semelane, 2019).



“Ensure sustainable consumption and production patterns.”

Table 4.1: Summary of Initiatives that Promote SCP, Developed by PAGE Member Countries

South America	
Uruguay	National Action Plan in SCP
Peru	Eco-efficiency programmes
Brazil	National Action Plan in SCP
Africa	
Burkina Faso	Promotes best practices; sustainable breeding training for forage crops and for livestock; pastoral hydraulic systems development; formulated a law on effective guidance on pastoralism
Mauritius	Initiated an energy auditing system and energy-efficiency regulations for public procurement; implemented water sector codes and regulations, including water audits and rainwater harvesting systems; implemented a green buildings rating system and guidelines, with amended building regulations; provides financial incentives for sustainable actions
Ghana	Developed water and sanitation technology transfers; regional training and awareness programmes; safe wastewater reuse programmes; integrated water resource management, including Life Cycle Assessments
South Africa	Developed circular economy and climate smart agriculture guidelines through the Switch Africa Green Programme and partnered with the PAGE programme for undertaking training on the latter

(Source: Adapted from Ntulie & Semelane, 2019.)

4.3 Sustainable Consumption and Production Best Practices

4.3.1 Multi-Stakeholder Engagement

Engaging with a wide variety of stakeholders in an inclusive and participatory policy process increases knowledge and awareness of SCP policies and programmes among stakeholders, while also fostering buy-in and commitment from them (Gidley et al., 2009; Gidley, 2016). Participatory approaches also foster multi-stakeholder partnerships and collaboration between government, the private sector, and civil society – critical for policy implementation (Gidley et al., 2009; Gidley, 2016). Multi-stakeholder partnerships can also encourage knowledge-sharing, learning, and technical and financial support for SCP practices and policies (UNEP, 2015; Ntulie & Semelane, 2019).

4.3.2 Financial Incentives and Punitive Measures

There are various policy tools that can be used to incentivise SCP practices or punish unsustainable practices, including environmental taxes (such as a carbon tax); tax incentives and rebates; grants; and fines. In 2019, South Africa introduced a carbon tax as a financial incentive to reduce greenhouse gas (GHG) emissions and substitute high-carbon goods and services with less carbon-intensive goods and services (RSA, 2019). Water tariffs are also designed to ‘punish’ high-water users through a tiered pricing approach. In the City of Johannesburg, for example, the first six kilolitres of water for household consumption are free. Further consumption, from 6–10 kilolitres, is priced at R16 per kilolitre per month, and so each tier increases in price, until those using more than 50 kilolitres of water per month are charged at R53 per kilolitre per month (City of Johannesburg, 2020).

4.3.3 Eco-Labeling to Promote Sustainable Consumption

Like nutrition labels on food packaging, eco-labels provide consumers with information about a product’s environmental-friendliness (Dreyer et al., 2016), such as the carbon footprint of the product; if it was produced

THE ONE PLANET NETWORK

The One Planet Network is a multi-stakeholder partnership that supports countries with their 10YFPs implementation of SCP and achieving SDG 12. The network focuses on six key support areas:

- Public procurement;
- Tourism;
- Food systems;
- Buildings and construction;
- Consumer information; and
- Sustainable lifestyles and education (One Planet, n.d.).

The network has produced about 400 technical tools and support resources; fostered 88 production process changes and 20 high-level resolutions, declarations, and outcome documents across its member countries; and implemented over 2 000 SCP initiatives around the world (One Planet, n.d.; Ntulie & Semelane, 2019).

in a sustainable manner; or if the product/packaging is recyclable or not (UNEP, 2015; Ntulie & Semelane, 2019). Including this information on products or their packaging, aims to drive sustainable consumption by providing consumers with the relevant information they need to make more sustainable consumption choices (UNEP, 2015; Ntulie & Semelane, 2019).

However, eco-labels are only effective up to a certain point, at which point the price of the environmentally-friendlier product and/or service may pose a potential barrier. Access to and availability of environmentally-friendly products have also been identified as potential barriers when trying to advance the uptake of such products by consumers (Dreyer et al., 2016). The use of eco-labels as an instrument for shifting consumer behaviour needs to be supported by other policy measures and actions, such as consumer education and awareness-raising campaigns on eco-labels and their different environmental aspects (Dreyer et al., 2016).

4.3.4 Corporate Sustainability Reporting

Corporate sustainability reporting is considered synonymous with other non-financial reporting terms, such as Corporate Social Responsibility (CSR) and triple bottom-line reporting requirements (GRI, 2020). It also forms a crucial part of integrated reporting, which combines both financial and non-financial performance analyses.

Sustainability reporting supports companies with identifying, measuring, and communicating the economic, social, and environmental impacts caused by their day-to-day activities. It also provides a review of a company's environmental, social, and governance (ESG) performance, and demonstrates the links between a company's strategy and their commitment to a sustainable economy (GRI, 2020).

4.3.5 Sustainable Public Procurement (SPP)

Sustainable public procurement¹⁷ (SPP) has an important role to play in the transition to an inclusive green economy, as it stimulates demand for environmentally- and socially-sustainable goods and services (Testa et al., 2016; Ntulie & Semelane, 2019; Sonnichsen & Clement, 2020). However, it must achieve the appropriate balance between environmental, social, and economic requirements within a particular context (Ntulie & Semelane, 2019). It is also a critical avenue for supporting sustainable and inclusive finance for the sustainable transition (Zenizeni Sustainable Finance, 2019).

The Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) is a good example of SPP in South Africa, which not only allows for large-scale investment into renewable energy (with associated environmental benefits), but also carries employment and local production benefits. In 2015, the REIPPPP attracted R193 billion in investment, with a net benefit of approximately R4 billion to the economy (Department of Energy, 2015). The programme also includes an ambitious 75% local content commitment.

GLOBAL ECOLABELLING NETWORK (GEN)

GEN is a non-profit association of third-party performance auditors that certify and develop eco-labelling for products and services. GEN highlights three fundamental goals behind eco-labelling:

- To safeguard the environment;
- To support environmentally-sound innovation and leadership; and
- To build consumers' consciousness of environmental issues.

GEN aims to foster cooperation, improve information exchange, and harmonise standards among its members and eco-labelling programmes, through engaging with international organisations (GEN, 2020). Through its various eco-labelling programmes, GEN also seeks to promote eco-labelling for a wider reach. The desired outcome of these actions is to foster greater demand for, and supply of, more environmentally-responsible goods and services (GEN, 2020).

In **Canada**, homeowners could receive a support grant of C\$5 000 for improving the energy-efficiency of their homes through the Eco Energy Retrofit Scheme that ran from 2007 to 2012 (NRCAN, 2014; Ntulie & Semelane, 2019).

In **Denmark**, the price of water was increased by 150% through various water pricing schemes and taxes, which reduced household water consumption significantly (Ntulie & Semelane, 2019).

¹⁷ Sustainable public procurement (SPP) is defined as the purchasing of goods and services by government, which generate benefits for society and the economy, whilst minimising environmental damage (Sonnichsen & Clement, 2020). Green public procurement (GPP), on the other hand, is defined as the purchasing of goods and services by government with reduced environmental impact throughout their life cycle (Sonnichsen & Clement, 2020).

This has directly led to the establishment of new factories to service the manufacturing needs for both the wind and solar energy industries in the Western Cape (WCG, 2015).

For example, the Western Cape Government established SPP commitments and targets, outlined in Table 4.2, into their procurement policy (WCG, 2015). While the targets themselves might be outdated, they provide a good example of how to foster SPP at a provincial level.

Clearly outlining commitments and targets into SPP policy can support wider uptake and implementation.

Table 4.2: Western Cape Government SPP Commitments and Targets

Relevant entity	Commitment/Target
Provincial Treasury implementing National Department of Trade, Industry and Competition	To implement 75% local content in procurement by 2019 (Local Procurement Accord, 2011)
Western Cape Government (WCG)	To position the Western Cape as the green economic hub of Africa and to be the lowest carbon province. WCG and City of Cape Town, as major property owners and users of electricity and water, to take the lead in promoting resource-efficiency (<i>Green is Smart: Western Cape Green Economy Strategy Framework 2013</i>)
Western Cape Department of Human Settlements	To allocate 30% of budget to the procurement of sustainable technologies for housing
Western Cape Department of Transport and Public Works	To ensure all new WCG accommodation is certified to a minimum of a 4-Star Green Star rating (Transport and Public Works Annual Performance Plan 2015/16)

(Source: Western Cape Government, 2015.)



Photo: SAPPI

4.4 The South African Perspective

South Africa does not have a standalone SCP policy framework, but has instead embedded such policies and measures into various existing policy frameworks, some of which are highlighted in Table 4.3. These have been found largely to apply to the following sectors: energy; transport; agriculture; water and sanitation; waste management; infrastructure and development (green buildings); minerals and resources; manufacturing; and science and technology (Ntulie & Semelane, 2019).

However, South Africa is only in the early stages of sustainable systems change, and there is still a large degree of uncertainty around the application of SCP policies, measures, and practices across a number of sectors, such as agriculture, infrastructure, and public procurement (Ntulie & Semelane, 2019). The REIPPPP in the energy sector provides somewhat of a national benchmark for best practice, despite its many challenges. Those sectors 'lagging behind' in the transition can draw on lessons from the REIPPPP.

The policies listed in Table 4.3 aim to provide an enabling environment for SCP, so that the private sector and micro-, small- and medium-sized enterprises (MSMEs) can respond positively to sustainability challenges and the green transition (Ntulie & Semelane, 2019).



Photo: Green Overall

SPP FOR SUPPORTING THE SECONDARY PLASTICS MARKET

SPP can foster demand in the secondary plastics market (or the market for recycled plastic), and plays an important transitional function for a circular plastic economy. SPP can drive up demand for, and value of, secondary plastic material, and in turn, increase the collection and recycling of different plastic materials. In doing so, SPP can make secondary plastic more price competitive against virgin plastic, and encourage the wider use of recycled material in plastic packaging and products.

Government could mandate that all problematic and unnecessary plastic types and applications (such

as expanded polystyrene, high-impact polystyrene, and multi-layer laminates) be used in applications for the top layer of bitumen on tar roads, or that all government buildings use furniture made from recycled problematic plastic types. Establishing SPP targets and commitments at all levels of government, from national down to municipality level, can be further supported by other policies and regulations, such as the Extended Producer Responsibility Regulations. While this example is strictly a 'transitional down-scaling opportunity for recycled problematic plastic', rather than an all-inclusive circular solution, it could play an important 'transitional' role in fostering demand in the secondary plastics market.

Table 4.3: Policies Promoting SCP in South Africa

Sector	Policy	Objectives
Economic development	National Development Plan	It outlines the need to transition to an inclusive, low-carbon, and climate-resilient society.
	Green Economy Accord	It increases green economic activity (which leads to investment, jobs, and competitiveness) and promotes the decoupling of environmental damage from economic growth.
	Industrial Policy Action Plan (IPAP)	It promotes the development, growth, and increased competitiveness of the South African manufacturing sector and the economy's industrial capacity.
	Sector Master Plans (Department of Trade, Industry and Competition)	They aim to accelerate growth across key industrial sectors, while upgrading their technological base and competitiveness.
Energy	White Paper on Renewable Energy Policy (2004)	It investigates the medium- and long-term potential of renewable energy.
	Energy Efficiency Strategy (2005)	It encourages energy-efficiency gains of 12% by 2015.
	Integrated Resource Plan 2019	It includes the electricity infrastructure development plan, based on least-cost electricity supply and demand balance, considering security of supply and the environment.
	Renewable Energy Independent Power Producers Procurement Programme (REIPPPP)	It aims to secure renewable electricity generation from the private sector to supply the national grid.
	National Climate Change Response Strategy	It establishes GHG emissions reduction targets and calls for a coordinated and cooperative response to climate change mitigation and adaptation.
	Carbon Tax	It increases the relative price of carbon-intensive goods and services to encourage a behavioural shift to less carbon-intensive goods and services.
	Climate Change Bill	It legislates climate mitigation and adaptation action across the economy.
	Biogas Report: Facilitation of large-scale uptake of alternative transport fuels in South Africa – the case for biogas (DEA, n.d.)	It facilitates the large-scale uptake of alternative transport fuels in South Africa – the case for biogas.
Environmental management	National Environmental Management Act (NEMA) 107 of 1998	It provides environmental management principles, including resource-efficiency, waste-minimisation, and sustainable procurement.

Sector	Policy	Objectives
Waste management	National Environmental Management: Waste Act 59 of 2008 – National Waste Management Strategy	It sets out regulations for sustainable waste management and a circular economy.
	Extended Producer Responsibility Regulations	Section 18 of the Waste Act extends producers' responsibility for their products and packaging to their end-of-life phase, as a means of promoting circular economy principles.
Water management	National Water Act 36 of 1998	It provides for equitable and sustainable protection, use, development, and management of the country's water resources.
	National Water Resource Strategy (2004)	It promotes integrated water resource management across the country.
Sustainable public procurement	Green Paper on Public Sector Procurement Reform (1997)	It encourages sustainable procurement by organs of state and promotes SCP across the country.

(Source: Adapted from Ntulie & Semelane, 2019.)

Providing an enabling environment allows other economic actors to access new markets and develop innovative, sustainable, and circular products, production processes, and business models. Business concerns over short-term competitiveness issues (such as those surrounding the carbon tax) should be evaluated against longer-term competitiveness issues resulting from no action and continued reliance on unsustainable business practices. However, these concerns must also be balanced against longer-term transitional risks associated with key commodities and sectors that might have high international demand now, but which will decrease in a more sustainable global economy. An example of this is reduced demand for platinum (used in catalytic converters in internal combustion engines) in a world of electric vehicles, which do not need platinum (Kay, 2018).

Consumers also have a role to play and need to be empowered to make sustainable choices through knowledge and awareness campaigns and capacity-building (Ntulie & Semelane, 2019). Civil society has a large responsibility in this regard, to not only inform and mobilise their constituents, but to hold government and the private sector accountable for the sustainable

transition. While civil society has played an important advocacy role for sustainability, their efforts also need to encourage sustainable consumption behaviour from the ground up (Ntulie & Semelane, 2019). However, in a society with significant unemployment, poverty, and the highest income inequality rates in the world, influencing consumer choices becomes a significant challenge.



Consumers also have a role to play and need to be empowered to make sustainable choices through knowledge, awareness campaigns, and capacity-building.

4.5 Sustainable Consumption and Production (SCP) across Sectors

4.5.1 Renewable Energy

While renewable energy itself is sustainable and resource-efficient/circular in nature, the technology used to harness renewable energy is not. Wind turbines, solar panels, and batteries of the early 2000s are reaching their end-of-life, and are discarded in landfills (Martin, 2020; Belton, 2020; Chadan, 2020; Shaibani, 2020). The presence of hazardous materials and heavy metals in these components could result in significant pollution and health crises if released into the environment. Therefore, renewable energy technology waste needs to be managed appropriately (Martin, 2020; Belton, 2020; Chadan, 2020; Shaibani, 2020). In addition, the production and installation of these technologies uses significant amounts of finite resources (Gallagher et al., 2017).

However, the cost of recycling is higher than landfill, and the recovered material has a lower value than virgin material, resulting in little interest in recycling these renewable energy technologies (Shaibani, 2020). Closing the loop in the renewable energy cycle is thus the next challenge for industry, specifically with regards to the end-of-life of their products and reducing the pressures on virgin resources (Gallagher et al., 2017). But considering the challenges associated with recycling, these technologies should rather be redesigned for circularity from the outset. According to Gallagher et al. (2017), redesigning technologies for circularity, referred to as eco-design, can improve recycling rates and reduce virgin resource/material usage, thereby reducing natural resource depletion.

4.5.2 Biofuels and the Bioeconomy

Sustainable biofuels present a significant opportunity for sustainable fuel consumption and production in South Africa. Biofuel feedstocks are agro-based and thus present an opportunity to create more jobs in the labour-intensive agricultural sector, thereby stimulating economic development in rural and urban farming areas (Fakir et al., 2019).

For example, diversifying the sugarcane industry to produce biobased fuels and chemicals, offers a critical solution to save jobs that are threatened by cheap sugar imports. More jobs can be created by producing bioenergy crops on 'remain land' – land available for biofuel feedstock production once food and environmental sustainability criteria have been considered. Between 80% and 180% of the domestic aviation fuel demand in South Africa can be satisfied by bioenergy crops grown on this remain land (Bole-Rentel et al., 2019).

Further jobs can be created in the collection and extraction of feedstock, which can also be used to produce sustainable biofuels, such as from forestry residues and invasive alien plants. The bioeconomy also offers new opportunities for developing new industries and skilled jobs based on the different processing technologies for biofuels production. These industries will require the expertise of engineers, scientists, and technicians from various disciplines (Bole-Rentel et al., 2019). However, it is important to remain cognisant of

BIOFUEL APPLICATION IN SOUTH AFRICA

Since 2013, Sunchem International has promoted the use of sustainable biofuels in South Africa, with inaugural biofuels flights between Johannesburg and Cape Town on South African Airways (SAA) and Mango Airlines taking place in 2016 (Sunchem International, 2020). The feedstock they use for the biofuel is called *Solaris tobacco*, a nicotine-free tobacco variety, that is grown by both commercial and community farmers in Limpopo.

The *Reya Foya* project was launched in 2017, to introduce Solaris-based biodiesel into the ground-handling operations at OR Tambo International Airport, with the long-term view of scaling-up feedstock and infrastructure to achieve a fully localised value chain for biojet and green diesel production in South Africa (RSB, 2019).

unintended consequences and potential trade-offs. For example, resources (agricultural land, water, energy) could be redirected to the production of biofuels rather than food products, which could potentially have adverse impacts on food security.

4.5.3 Water Resources Conservation and Management

The sustainable use of water resources in consumption and production is critical if South Africa is to avoid another 'Day Zero'¹⁸ threat. SCP strategies for improved water resource conservation and management need to be applied throughout the water value chain, from catchment areas right through to the tap and beyond.

SCP strategies for improved water resource conservation and management:

- **Ecological water resources**, or water in nature, need to be conserved through integrated water resource management policies, water stewardship programmes, and protecting Strategic Water Source Areas (SWSAs) above and below ground. Programmes focused on the clearing of alien invasive species and ecological infrastructure maintenance and rehabilitation, can support water conservation in SWSAs and provide shovel-ready employment opportunities (WWF-SA, 2016; WWF-SA, 2018b).
- **Physical water infrastructure** (for storing and transporting) needs to be upgraded and effectively maintained to reduce and prevent water leakages (WWF-SA, 2016; WWF-SA, 2018b). Leakages can either be from infrastructure failures, such as leaks, or evaporation from large shallow dams. Floating solar panels on dams and irrigation canals, for example, provide a unique opportunity to reduce evaporation and provide sustainable energy to run irrigation systems (Caboz, 2019). Infrastructure also needs to be designed to offer water recycling opportunities that all productive sectors can implement, with the support of policy and legislation to do so (UNEP, 2015; Ntulie & Semelane, 2019). Water pollution and treatment technologies and repair systems are also essential for more sustainable water-use.
- **Water consumption and reuse** by productive sectors and households needs to be improved upon through

various water-use efficiency strategies. For example, the use of drip irrigation rather than flood irrigation for agriculture, and retrofitting buildings and housing with grey water systems (WWF-SA, 2016; WWF-SA, 2018b). Water-use efficiency and recycling incentives and programmes, such as consumer awareness programmes, harsher penalties for over-consumption, and improved water pricing strategies, can all support more sustainable water-use (UNEP, 2015; Ntulie & Semelane, 2019).

4.5.4 The Agricultural Sector

Sustainable and climate-resilient agriculture is vital for ensuring that the world's basic nutritional requirements are met, while reducing the environmental impacts of the sector (UN, 2017; Ntulie & Semelane, 2019). The application of SCP principles in the agricultural sector can enhance the regenerative capacity of the natural resource base for improved productivity, without disrupting nutrient balances and basic, yet critical, ecological cycles (Ntulie & Semelane, 2019). SCP practices may also call upon local indigenous knowledge, and thereby protect socio-cultural elements of rural communities.

The Food and Agriculture Organisation of the UN (FAO) and the UN Environment Programme (UNEP) jointly established the **FAO-UNEP Food Systems Programme** to improve resource-use efficiency and reduce pollution from the food system, while also addressing food and nutrition security (FAO-UNEP, 2012).

The Department of Agriculture, Land Reform and Rural Development (DALRRD), and other relevant national departments, such as National Treasury; the Department of Forestry, Fisheries and the Environment; and the Department of Trade, Industry and Competition, need to drive the implementation of SCP strategies.

18 'Day Zero' was the projected date that the City of Cape Town would run out of water during the prolonged drought between 2015 and 2018.

This should be an inclusive process, working with a broad range of stakeholders, from farmers to food processors, to brand owners, to retailers, and consumers. Again, multi-stakeholder collaboration is essential for not only implementing SCP strategies, but financing them as well (Ntulie & Semelane, 2019).

SCP strategies should be taken further and applied throughout the agricultural value chain – from seed to table. This will support sustainable processing and transportation of agricultural products, reduce food waste, and provide employment opportunities, decent wages, and good working conditions for all along the food value chain (UN, 2017; Ntulie & Semelane, 2019).

4.6 Challenges and Barriers to Sustainable Consumption and Production (SCP) in South Africa

Increasing the uptake of more sustainable and circular consumption and production systems depends largely on the willingness of producers and consumers to engage in greener practices and behaviours. A significant challenge in this regard is influencing consumer and producer behaviour (Ntulie & Semelane, 2019).

Joshi and Rahman (2015) investigated consumer choices related to household management, food choices, and transport behaviours for work, leisure, and travel, to examine the extent of green purchasing. The research found that sustainable consumer choices are influenced by individual and situational factors, summarised in Table 4.4.

Table 4.4: Individual and Situational Factors that Influence Consumer Choices

Individual factors	Situational factors
<ul style="list-style-type: none"> ▪ Values ▪ Personal norms ▪ Emotions ▪ Habit ▪ Perceived effectiveness ▪ Trust ▪ Knowledge/awareness 	<ul style="list-style-type: none"> ▪ Social norms ▪ Culture ▪ Price ▪ Availability/accessibility ▪ Product attributes and quality ▪ Brand image ▪ Eco-labelling

(Source: Joshi & Rahman, 2015.)

Drivers of sustainable choices were found to be environmental concerns, knowledge and awareness, product attributes, and subjective norms. Barriers to sustainable choices were price, availability, and lack of trust (Joshi & Rahman, 2015). Given the levels of income inequality, poverty, and unemployment, price and access arguably become deeply entrenched barriers in South Africa that are beyond the control of the individual.

Therefore, policies and measures should address these barriers, such as subsidising the production of sustainable products, or taxing the unsustainable ones. Policies like sin taxes, or the carbon and sugar taxes, are designed to do just that – provide a price signal to consumers (and producers) and increase the relative price of unsustainable products (those with a high sugar or carbon footprint), so that they substitute for the now relatively cheaper sustainable options. The key issue is that the alternative sustainable option needs to be available and accessible to everyone, otherwise environmental tax policies may have perverse outcomes for lower income-earning individuals (Dorband et al., 2019).

Other non-market policies can also drive consumer awareness on environmental issues and the impacts on their daily lives. Such awareness programmes should ultimately aim to create a culture of sustainability among all South Africans, so that they choose products with less plastic packaging, or reduce red meat in their diets, for example.

4.7 Recommendations for Strengthening Sustainable Consumption and Production (SCP) Approaches in South Africa

4.7.1 Policy Frameworks and Instruments

Gaps in existing policy frameworks need to be identified, while SCP objectives also need to be mainstreamed across national policies. It is imperative to ensure that policy instruments that support or enable SCP are aligned across related sector policies and national departments. Products and services also need to be identified and targeted by policy interventions. For example, there should be a national list or register of key natural resources (and where they come from) upon which the South African economy depends, and which are of high strategic value in a low-carbon global economy. A similar list of secondary resources that are of strategic economic value also needs to be developed and matched against the first. This will help identify where the strategic opportunities lie for a circular economy transition.

4.7.2 Sustainable Public Procurement (SPP)

The implementation of SPP policies and strategies in the public sector is an option to be considered. SPP should be the minimum standard for procuring goods and services across all sectors and levels of government. SPP can play a critical role in catalysing SCP and in supporting secondary markets where applicable (such as in the case of recycled plastic).

4.7.3 Inclusive Policy Processes and Multi-Stakeholder Collaboration

Inclusive social dialogues and active communication of SCP programmes are critical for informing stakeholders, fostering collaboration, and implementing policies. Multi-stakeholder partnerships and collaboration among value chain actors are vital for knowledge-sharing and implementing best practices.

4.7.4 Capacity-Development and Resource Allocation

Sustainable finance solutions are needed to support and encourage business to implement SCP strategies. This includes allocating resources to capacity-development, consumer awareness campaigns, and training, educating, and reskilling workers, to take advantage of SCP opportunities and the Fourth Industrial Revolution. Investments from both the private and public sector into research and development of new technologies or production processes that can improve SCP, is also critical.

4.7.5 Monitoring and Evaluation

Monitoring and evaluation (M&E) in the context of SCP is important for evaluating the effectiveness of different SCP policies and strategies. Changes in consumption and production patterns need to be tracked against the implementation of related policies and measures. For example, measuring the change in national GHG emissions in relation to the carbon tax, which would be achieved through the reporting mechanism in the Carbon Tax Act. Utilising targets and indicators from the Sustainable Development Goals (SDGs) can support M&E when defining appropriate indicators that become challenging. Global SCP reporting initiatives, such as the Carbon Disclosure Project (CDP) or the Johannesburg Stock Exchange's (JSE) Carbon Disclosures for listed companies, are critical for measuring progress at the company level.

Effective M&E of resource and material flows throughout the economy could be used in conjunction with a national register of strategic natural, primary, and secondary resources, to develop a life cycle optimisation platform. Such a platform would track and monitor the availability and cost of waste materials that could be used as secondary inputs elsewhere in the economy.



Key Takeaways

1. Integrate sustainable consumption and production into existing policy frameworks.

- Sustainable consumption, production, and circular economy frameworks can either be implemented as standalone policies or integrated into existing policies. Given the timeframes, governance, and oversight process for new policy development, integrating sustainable consumption and production into existing policy frameworks is recommended.

2. Promote multi-stakeholder collaboration.

- Multi-stakeholder partnerships for collaboration within, across, and between value chains (vertically and horizontally) is critical for formulating and implementing sustainable and circular consumption and production frameworks and policies.

3. Global reporting initiatives drive corporate sustainability.

- Cleaner production has been identified as a 'low-hanging fruit', depending on the sector, given the various climate change and global reporting initiatives that are already in place to drive private sector sustainability.

4. Consumers can be key drivers of change.

- With support from government and business, consumers can become key drivers of sustainable consumption and production. A balance of punitive measures and incentives can help influence consumer behaviour to be more sustainable.

5. Sustainable public procurement has a key role to play.

- Sustainable public procurement can support secondary material markets by driving up demand and value. It is also a critical avenue for supporting sustainable and inclusive finance for a circular economy transition.



Photo: Karin Schembrucker



Chapter 5

Economic Inclusion within the Green Economy: A Case for Small Businesses in a Just Transition

About this Chapter

Chapter 5 provides a short introduction to the background of a just transition and how it is framed in the South African context. It further elaborates on the critical role that micro-, small- and medium-sized enterprises (MSMEs) play in the economy and in

achieving a just transition. An overview of the barriers faced by small businesses that might hinder their ability to transition and take advantage of the opportunities from the transition, is also provided, before concluding with some high-level recommendations.

5.1 A Just Transition in South Africa

The concept of a just transition was born during the 1970s in the USA labour movement in an effort to end environmental damage that was threatening jobs. It was later pursued in labour and civil society advocacy and linked to the United Nations Framework Convention on Climate Change (UNFCCC) in the 2000s (Scholtz et al., 2020). This advocacy led to the just transition issue being included in the preamble to the UNFCCC Paris Agreement of 2015:

“The Parties to this Agreement ... [t]aking into account the imperatives of a Just Transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities...”

The just transition concept was introduced to South Africa when the Congress of South African Trade Unions (COSATU) adopted it as part of their resolution on climate change during their Tenth National Congress in 2009 (COSATU, 2009). In 2011, the Central Executive Committee of COSATU adopted a Policy Framework on Climate Change, which was comprised of 15 principles for *A just transition to a low-carbon and climate-resilient economy: A call to action* (COSATU, 2011; COSATU, 2012).

By the mid-2010s, the just transition had evolved into a much broader set of principles and ideals on how to

best manage the employment impacts of a transition to an inclusive low-carbon economy. The South African Federation of Trade Unions (SAFTU) addressed the issue of a just transition at the Working-Class Summit of unions and civil society organisations which it convened in July 2018 (SAFTU, 2018), and the Federation of Unions of South Africa (FEDUSA) has since developed its own policy on climate change. More recently, the concept of a just transition is gaining traction within government and the private sector (Scholtz et al., 2020).

A just transition is broadly accepted as a strategy to ensure that the transition to a low-carbon green economy does not excessively impact workers and low-income communities that currently rely on carbon-intensive industries for their jobs and livelihoods (SAFTU, 2018). However, different actors have differing understandings of the complexities of a just transition (Godinho, 2019). These vary from a focus on active labour market policies to manage the transitional impacts on workers, to those who extend the concept to achieving a more inclusive and just socio-economic system more broadly, and some who question whether a just transition can be achieved in the current capitalist system.

For the purposes of this report, the just transition can be understood as the recognition that active labour market policies are necessary but insufficient to secure an inclusive transition to a low-carbon green economy on their own, and must be complemented by industrial, spatial, and regional economic policies (Scholtz et al., 2020).

5.1.1 Framing a Just Transition in South Africa

The just transition debate in South Africa has traditionally focused on the electricity sector – transitioning from coal-based electricity to renewable electricity generation – and the implications thereof for workers and communities along the coal value chain (Scholtz et al., 2020). While the transition will likely cause job losses along the coal value chain, renewable energy will not only reduce greenhouse gas (GHG) emissions and mitigate climate change, but also have the potential to create jobs, sustainable livelihood opportunities, and potentially open new manufacturing opportunities in South Africa (Scholtz et al., 2020). The just transition is about navigating potential trade-offs and ensuring that the benefits outlined above, are equally distributed for the benefit of South Africa’s developmental priorities.

However, there is a misconception that job losses in fossil fuel value chains must be replaced by renewable energy jobs (Scholtz et al., 2020). On the one hand, job losses in the mining sector are not only the result of a low-carbon transition. They are also caused by other drivers, such as changes in international resource markets and increased automation from the Fourth Industrial Revolution. On the other hand, different sectors will face different levels of exposure to transitional risks, and their potential for growth and job creation will also be different. Therefore, employment opportunities may not lie in the same sector in which job losses occur (Scholtz et al., 2020). Key would be the creation of new green jobs, such as mine rehabilitation, renewable energy, sustainable/climate smart agriculture, and green manufacturing. Also of relevance, would be the extent to which existing local ownership,¹⁹ socio-economic, and enterprise development requirements under the Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) should be reconfigured to support the migration of workers into renewable energy (Scholtz et al., 2020).

The just transition is also critical outside the energy sector. Carbon-intensive manufacturing may also experience job losses. But the green economic transition also provides an opportunity for innovation that could

drive and support new industries and services with accompanying new jobs (Scholtz et al., 2020). For example, South Africa’s vehicle manufacturing sector needs to transition towards the production of electric vehicles in response to global market trends or risk leaving the industry stranded. However, this might also cause negative impacts in the platinum industry as

SUMMARISING THE NEED FOR A JUST TRANSITION IN SOUTH AFRICA

The transition to a low-carbon economy presents a risk to labour in fossil fuel-based and carbon-intensive industries, particularly along the coal-based electricity value chain (Scholtz et al., 2020). Given the existing high unemployment rate in South Africa, which has been further exacerbated by the COVID-19 Pandemic, the transition will need to be carefully managed through skills development, employment, and social protection programmes, to minimise negative employment impacts.

Going beyond this, a just transition also seeks to take advantage of the opportunities for job creation and sustainable economic development offered by the low-carbon transition (Scholtz et al., 2020). Policy coordination and alignment with just transition best practices will be required to strengthen the enabling environment and benefit from a just transition process.

Financial resources will also need to be sourced and/or redirected into different aspects of a just transition, such as skills development and employment programmes. Innovative sustainable finance mechanisms for a low-carbon, green economy, such as the Green Outcomes Fund or green/climate bonds, can be tailored to support the employment objectives of a just transition. For example, the inclusion of employment requirements to the Green Outcomes Fund or developing specialised just transition bonds, can be used to finance reskilling and employment programmes in high-risk sectors and communities (Scholtz et al., 2020).

¹⁹ Please refer to the work done by Project 90 for more on renewable energy ownership (Project 90, 2018a; Project 90, 2018b; Project 90, 2018c).

lower production of internal combustion engines will reduce global and local demand for platinum – another transitional risk (Kay, 2018). A just transition will again require that such interactions and trade-offs along different value chains are mapped and prepared for, including investment in the necessary infrastructure and skills development. For example, the use of platinum in hydrogen fuel cell vehicles could offset the negative impacts of reduced demand for platinum in internal combustion engines (Moodley, 2018).

Similarly, a just transition is critical for agriculture and the broader food system. Agriculture is the largest employer of unskilled workers in South Africa (Scholtz et al., 2020; Stats SA, 2020), and contributes significantly to anthropogenic environmental degradation and climate change. The sector also disproportionately bears the brunt of climate change, manifested in persisting drought in some instances, and extreme rainfall in others (Scholtz et al., 2020).

Another critical dimension of a just transition in South Africa is the inclusion of women and youth in the low-carbon economic opportunities and in decision-

making platforms. Women continue to face exclusion, discrimination, and disproportionate exposure to socio-economic vulnerabilities (ILO, 2017a). Climate change and transitional responses to it risk increasing gender inequality, as they disproportionately impact women and overlook their specific needs. Addressing gender dynamics is an integral part of climate action and can contribute to achieving gender equality and promoting effective mitigation and adaptation measures (ILO, 2017a; Scholtz et al., 2020).

Youth are also critical stakeholders in the just transition, as they face disproportionately high levels of unemployment and will bear the brunt of future climate disasters and socio-economic impacts of transitional risks. Youth voices are increasingly being heard in the climate space through mobilisations, such as Fridays for Future, Youth for Climate, and Youth Strike 4 Climate (Scholtz et al., 2020). While a just transition must seek to minimise the negative employment impacts of a green economic transition, it must also seek to address youth and gender inequalities, and look to empower young people and women.

5.2 Small Businesses Play a Key Role in the Economy and in a Just Transition

Micro-, small- and medium-sized enterprises (MSMEs) play an important role in the economy and society, which differs fundamentally from the role of large corporations (Montmasson-Clair & Mudombi, 2019). Small businesses provide income generation and wealth-building opportunities for people who might not be able to access more formal alternatives. In contrast to large businesses that generally serve and engage in international markets, small businesses focus on local economic activities and services, and play a critical role in local economic development (Montmasson-Clair & Mudombi, 2019). MSMEs are, therefore, important role players in a just transition to a green economy.

In most countries, MSMEs are an important source of income for most of the population. In many developing countries, employment and earnings generated by small

businesses contribute to lifting people out of poverty (Montmasson-Clair & Mudombi, 2019). In Mongolia, for example, MSMEs account for two-thirds of businesses, contribute approximately 20% to GDP, and employ approximately 70% of the labour force (PAGE, 2014).

“An economy with a larger share of SMMEs will generally enjoy a higher economic growth rate” (Ming-Wen, 2010).

While small businesses can contribute to poverty alleviation in South Africa, they are mostly informal and essentially survivalist, generating limited additional employment and low incomes (TIPS, 2017). While employers and employees in the formal sector

typically earn relatively decent wages, self-employed people in the informal sector generally earn less, by comparison.

Globally, small businesses provide a key pathway to inter-generational development and upliftment. In most developing economies, a large share of the population earns a livelihood from small family businesses in agriculture and retail (Page & Söderbom, 2015; Montmasson-Clair & Mudombi, 2019). This plays a key role in social upliftment and inter-generational progress through long-standing family assets, market connections, and an expanded local customer base. Small businesses also play a critical transitional role for young people entering into the employment market. However, there are concerns relating to the longevity, financing, and quality of jobs created by MSMEs for youth (Page & Söderbom, 2015; Montmasson-Clair & Mudombi, 2019).

The presence and function of small businesses are also impacted by policy decisions and laws. In South Africa, small businesses and associated markets were suppressed under Apartheid through restrictions on land ownership, access to credit, to infrastructure, and to formal education and training. These negative impacts have persisted into democratic South Africa, which has a smaller class of established small businesses, relative to its peers (TIPS, 2017; Montmasson-Clair & Mudombi, 2019).

Small businesses also support economic innovation and are integral in pervasive adaptation processes that define an inclusive economy (Groepe, 2015). MSMEs offer a wide range of local business actions that provide crucial insights for innovation and adaptation in support of technological and social change, productivity, and market access. MSMEs are subject to strong competition and have scant opportunities to extract rents. To

SMALL BUSINESS INNOVATION

Small businesses worldwide have seized opportunities associated with the digital and clean-tech revolutions. **Ghana-originated** mobile app, *Farmerline*, provides data on market prices, weather, and evolving farming techniques to smallholder farmers across Africa, helping increase harvests and incomes for more than 200 000 farmers in four countries (World Bank, 2014b).

There are many other examples of small businesses that have produced significant and bankable innovations through executional excellence, such as local livestock marketing in **Kenya** (Burns & Worsley, 2015) and smallholder dairy hub production and aggregation models in **East Africa** (Omondi et al., 2017).

survive and thrive, small businesses must be versatile, innovative, adaptive, and entrepreneurial (Groepe, 2015). New and emerging small businesses tend to exploit technological or commercial opportunities neglected by more established companies, and often introduce new business models to the market (OECD, 2015). The contribution to economic growth from MSMEs comes mainly from the prevalence of innovative entrepreneurs.

Understanding the critical role that small businesses play in the economy highlights their significant role in a just transition to an inclusive green economy in South Africa. They are particularly important for low-income earners, youth, and women, who are most vulnerable to both the impacts of climate change and various transitional risks. Therefore, prioritising support for small businesses within the broader green economic transition, is critical.

In 2015, South Africa's formal sector earnings for employers and the self-employed ranged from R8 000 to R12 000 per month for MSMEs. Informal employees, on the other hand, earned a median monthly income of only R4 000, while the informal self-employed earned just over half as much (TIPS, 2017).

5.3 Small Businesses are Critical for a Green Economy

Small businesses are central to a green economy, as their positive impacts extend beyond economic development (GEC, 2017; Montmasson-Clair & Mudombi, 2019). If guided closely, they generate material socio-economic and environmental benefits in line with sustainable development. Green, inclusive, and more resilient economies cannot be achieved without empowering MSMEs as innovative local actors to deliver socio-environmental transformation (GEC, 2017).

MSMEs can be extremely influential in the just transition in that they tend to be more willing to adopt broader innovative green strategies rather than incremental green practices with short-term results (Nulkar, 2014; Montmasson-Clair & Mudombi, 2019). They are more likely to seize opportunities afforded by a green economy and act as bottom-up agents of change. Social enterprises, which apply commercial strategies to improve financial, social, and environmental well-being, are illustrative of this.

Similarly, grassroots green enterprises are key adopters of radical environmental innovations (often neglected by established firms) in the production and manufacturing of environmental goods, services, and technologies (Marks & Hidden, 2017; Montmasson-Clair & Mudombi, 2019). Such enterprises are at the forefront of climate responses and innovations, both adaptation and mitigation, building resilient and adaptive community structures and processes. Grassroots enterprises can also play a role in strengthening productive and social networks, and in developing more inclusive pathways to sustainability (Mohamed, 2018; Montmasson-Clair & Mudombi, 2019).

This is true both in the formal and informal economy. Small-scale and subsistence farming, bioprocessing, trade, waste picking, recycling, upcycling, green infrastructure, technology, and construction, are a few green activities occurring in the informal economy (Smit & Musango, 2015; Montmasson-Clair & Mudombi, 2019). Importantly though, harnessing the potential of informal activities does not imply the need for formality. Sustainable development of the informal sector relies rather on wide-ranging approaches, such as sustainable

THE IMAI FARMING COOPERATIVE

The Imai Farming Cooperative in rural **Limpopo in South Africa**, aims to reduce food waste by preserving and adding value to vegetables, which would otherwise be thrown away. It targets predominantly female farmers, by providing training on organic farming practices, as well as helping them with rainwater harvesting, food preservation, and training in business skills. The cooperative provides an income to 21 people and has helped increase household income. The initiative has managed to secure a market with supermarkets for their products and has strategic partnerships with the University of Limpopo, as well as government agencies (SEED, 2015).

livelihoods, community-based natural resource management, the recognition of indigenous and local knowledge, ecosystem-based adaptation, and grassroots green entrepreneurship (Mohamed, 2018).

There is, however, a divide in developing countries between the informal and formal sector businesses that participate in the green economy. For example, many informal jobs created through ecosystem restoration (such as invasive alien clearing or waste management) provide additional income, but develop few skills and only offer short-term/seasonal jobs rather than a career (Smit & Musango, 2015).

5.3.1 Small Businesses are Being Left Behind

The potential benefits for inclusive and suitable development from small businesses remain largely unharnessed, despite their significant role in the economy and society. According to the International Organisation of Employers (IOE), it is often forgotten that 'just transition' does not only apply to multi-national corporations, but is above all about the small businesses who struggle to adapt without help, incentives, and support (Marinkovic, 2019).

South Africa recognises the important role that small businesses (notably cooperatives, rural and township enterprises) can play in the green economy and in bringing about sustainable development (DEA, 2017). The *National Development Plan Vision 2030* forecasts that by 2030, no less than 90% of new jobs will be created in small and expanding firms. In addition, a key aspect of South Africa's approach to the green economy transition is the strong emphasis on social inclusivity and pro-employment (Musyoki, 2012; PAGE, 2017a). This is not only evident in several policy frameworks, financing mechanisms, and incentives, but also in the establishment of the dedicated Department of Small Business Development. The government also hosts several programmes in support of small businesses, such as the Department of Trade, Industry and Competition's Incubation Support Programme and Black Industrialists Scheme (Montmasson-Clair & Mudombi, 2019).

The National Development Plan Vision 2030 forecasts that by 2030, no less than 90% of new jobs will be created in small and expanding firms.

Despite government efforts, growth in small business has remained limited over the past 20 years in South Africa. The number of employers and self-employed people in small businesses has stagnated, and the numbers they employ, their incomes, and the structure of production, have also stagnated (TIPS, 2017; Montmasson-Clair & Mudombi, 2019). This has been exacerbated by the impacts of COVID-19 on small businesses, and special attention will need to be given to designing incentive and support programmes for MSMEs. A green and just recovery should prioritise small business support to ensure that they continue to play a critical role in the economy and in supporting a just transition.

5.4 Barriers and Risks for MSMEs in the Just Transition Context

5.4.1 Generic Challenges and Barriers to Small Businesses

Small businesses face several challenges related to their size, limited resources (skills sets, access to information, technology, and finance), unfavourable policy, and industry and market conditions. In some cases, they also must compete with larger enterprises, and this can limit their ability to grow, scale-up, and take advantage of regional and global value chains (OECD, 2018; Montmasson-Clair & Mudombi, 2019). Generally, the entrepreneurial ecosystem has the following gaps:

- Mismatch between capacity support and funding;
- Fragmented support;
- Early-stage funding gap; and
- Lack of coordination between initiatives (UNEP-WCMC, 2012; Montmasson-Clair & Mudombi, 2019).

In addition, a focus on export markets places onerous compliance standards onto small businesses, which are uneconomical given their small scale.

5.4.2 Additional Challenges for Green Enterprises

Other challenges include:

- Markets for sustainable goods and services tend to be small and difficult to access. Public awareness of such products and services, and their associated benefits is also low, thus hindering demand (SEED, 2014).
- The absence of sustainable public procurement requirements and targets means little public spending is channelled into small sustainable businesses, further constraining market access (PAGE, 2017a).
- Small businesses generally have poor information and little knowledge about the green economy approach, its benefits, and opportunities (OECD, 2015; Montmasson-Clair & Mudombi, 2019).

5.4.3 Finance Barriers

Small green businesses also struggle to access funding, partly due to their innovative and unproven nature, and a lack of collateral. For example, 70% of small

businesses in developing countries identify access to finance as a critical barrier, while 15% report that they are underfinanced (UNEP-WCMC, 2012; SEED, 2014; UNEP, 2014).

5.4.4 Limited Skills and Education Barriers

Small businesses in the informal sector are generally run by people from previously disadvantaged backgrounds with limited skills and business experience. Therefore, poor human capital, limited start-up skills, and low levels of education become barriers to success for small informal businesses. This prevents such businesses from capitalising on economic opportunities and growing their enterprise, and they are greatly limited within the green economy space (UNEP-WCMC, 2012; Montmasson-Clair & Mudombi, 2019). More broadly, the transition to an inclusive green economy will need new skills among the labour force (Gulati et al., 2018), which will require investments in developing these new skills to make workers ready for the green transition.

5.4.5 Climate Change and Transitional Challenges

Small businesses can be a vehicle for achieving a just transition, however, they are also among the most vulnerable to the impacts of climate change and the

transition to a low-carbon economy, and especially when drastic shifts occur within markets (Montmasson-Clair & Mudombi, 2019). Small businesses require finance, capacity-building, and an enabling policy environment to be able to survive and build resilience during the transition. The IOE believes that not enough focus is being placed on small businesses in the just transition (Marinkovic, 2019). Without a shift and balance in existing power dynamics and the support of strong government policies and incentives, small businesses are at risk of being left behind in the transition to a low-carbon economy.

5.4.6 Institutional Barriers

South Africa faces a challenge in deciding how, where, and who to channel the necessary small business support to, given the many differences between formal and informal small businesses (SEED, 2014; Montmasson-Clair & Mudombi, 2019). Channelling support to the 'bottom of the pyramid' does not lend itself favourably to traditional business and finance institutions, and is generally regarded as a high-risk investment. In addition, South Africa's venture-capital market is not very well-developed, while finance institutions do not offer suitable finance vehicles that are easily accessible for MSMEs, particularly those located in rural areas (Montmasson-Clair & Mudombi, 2019).

5.5 Recommendations for Supporting Small Businesses for a Just Transition

5.5.1 Develop a Multi-Criteria Approach

Despite growing awareness of the importance of MSMEs and increasing political will to intensify support for them, their development remains hindered by several factors. A reframing of small business support and development is required, one which aligns with the Sustainable Development Goals (SDGs), Paris Agreement, and the ideals of an inclusive green economy. Historically, MSME support has been focused on economic outcomes, with little to no attention on the social and environmental benefits they generate. A multi-criteria approach to small business support is therefore recommended, to place

greater focus on socio-economic and environmental dynamics that underpin small business.

5.5.2 Develop Social Dialogue, Networks, and Partnerships

Social dialogue is an important aspect of supporting small businesses in generating green and decent work (ILO, 2011; Montmasson-Clair & Mudombi, 2019). Small enterprises are often nested within communities, with shorter supply chains that often contain more embedded services. A local business cannot survive without the support of people in the area, and as such, the idea

of value takes on broader dimensions (Montmasson-Clair & Mudombi, 2019). Securing and maintaining their support is critical. There is an inherent power dynamic that requires regular participatory dialogue to navigate. It is also necessary to give small businesses a voice in government processes, so that they have more influence in policy (PAGE, 2017a).

Networks and partnerships are important in developing and maintaining mutual and symbiotic relationships amongst different stakeholders. Collaboration between a wide range of stakeholders in the public and private sector, as well as with civil society stakeholders, creates shared value (PAGE, 2017a).

5.5.3 Reframe the Regulatory Framework for MSMEs in the Green Economy

Small businesses face significant regulatory burdens and have little incentive or support to implement sustainable practices (Montmasson-Clair & Mudombi, 2019). Strategies that promote small business participation in the green economy should provide both insight and traction for the development of environmental solutions. Unleashing the knowledge and enthusiasm of small green enterprises to participate in crafting smart policy, would gain both appropriate and owned solutions that are likely to spread organically.

A South African campaign called **LABELWISE** promotes eco- and social-labels and stimulates the demand for products that are environmentally-sustainable and produced, using best labour practices in the farming, tourism, forestry, and marine sectors (LABELWISE, 2018).

A national MSME promotion agency, which channels all government and private sector support to small businesses, could facilitate and support regulatory requirements of small businesses. In addition, sector-specific green certification (of business practices)

and eco-label schemes (for products and packaging), coupled with adequate incentives, can result in enhanced demand for green business practices (SEED, 2014; OECD, 2015; DEA, 2017; Montmasson-Clair & Mudombi, 2019).



Photo: Grootos Foundation

5.5.4 Reframe Skills Development for a Green Economy

Overcoming skills and education barriers will require targeted education and training programmes and significant finance. Skills development itself needs to be directed beyond business and financial training only, and should also include training that enhances social and environmental returns (Montmasson-Clair & Mudombi, 2019). SDG-aligned business incubation should also be supported. For example, in Guyana, small business development initiatives are underway to provide opportunities for capacity-building through dedicated procurement, subsidies, and credit guarantee programmes targeting small businesses (ILO, 2017).

Skills also need to be developed for different aspects of the green economy, including skills related to resource-use efficiency, low-carbon industry, climate adaptation and resilience, and natural resource management (Gulati et al., 2018). Table 5.1 provides a summary of different skills required for these four areas of the green economy.

5.5.5 Enhance Knowledge and Data

The progress, impact, and contributions of MSMEs to sustainable development is unclear due to data and information limitations, as well as the absence of a broader M&E framework.

This also makes it difficult to assess the impact of different policies, measures, and support programmes on MSMEs, and the inclusion of youth and women in the green economy. Therefore, it is recommended that these elements be included in a broader, centralised data, information repository, and M&E framework, as discussed in Chapter 4.

Table 5.1: Summary of Skills and Interventions Required for a Green Economy

Skills	Intervention
Skills supporting resource-use efficiency	Strategic business management skills: To build resource-efficient business models, leading to bottom-line benefits, and preparing for new regulations.
	Business/financial accounting skills: For carbon and natural environment accounting.
	Skills to design and adopt technologies, products, and processes: To increase resource-efficiency, including lean manufacturing.
	Project management skills: To implement resource-efficiency.
	Operator level actions: To maximise resource-efficiency.
Skills supporting low-carbon industry	Skilled scientists and engineers: For lower-carbon forms of energy.
	Skilled technicians: To install energy-efficiency measures and retrofit in households and businesses.
	Skills to design and adopt technologies, products, and processes: To minimise carbon emissions.
	Skilled operators: To minimise carbon emissions (e.g. driving in a fuel-efficient manner).
Skills supporting climate-resilience	Scientific and technical skills: e.g. to model and interpret climate change projections.
	Risk management skills: e.g. to assess future resource availability.
	Skills to design and adopt technologies, products, and processes: To improve climate-resilience.
	Skilled operators: To improve climate-resilience (e.g. retrofitting water-efficient technologies in households and businesses).
Skills to manage natural assets	Accounting skills: For the natural environment.
	Environmental impact assessment skills.
	Skills to design and adopt technologies, products, and processes: To oversee natural assets.
	Planning skills: To interpret environmental legislation targets, ecosystem services, design, management, and land-use planning.

(Source: Gulati et al., 2018.)

Key Takeaways

1. A just transition will reduce transitional impacts in carbon-intensive sectors.

- A just transition is broadly accepted as a strategy to ensure that the transition to a low-carbon green economy does not excessively impact workers and low-income communities that currently rely on carbon-intensive industries for their jobs and livelihoods. It seeks to minimise transitional impacts on employment, poverty, and inequality, while also taking advantage of different opportunities for sustainable development.

2. Small businesses play a key role in the economy and in a just transition.

- Small businesses are particularly important for low-income earners, youth, and women, who are most vulnerable to both the impacts of climate change and to various transitional risks. Small businesses can also generate material socio-economic and environmental benefits that are in line with sustainable development.
- Prioritising support for small businesses within the broader green and just transition, is critical for achieving a greener, fairer, and more resilient economy.

3. Small businesses are being left behind.

- Despite the government's recognition of the critical role that small businesses can play in the green economy, and the various structures in place to support them, various obstacles and barriers still exist that prevent their growth and development.

4. Implement a 'do no harm' approach to small businesses.

- Ensure small businesses are included and participate meaningfully in public policy- and decision-making processes via social dialogue.
- Recognise and enable small businesses, through a smart regulatory and policy environment that enables sustainable market creation, promotion schemes, public procurement, certification, eco-labelling, and other incentives for green business models.





Chapter 6

**South Africa's
Green Recovery
from COVID-19**

About this Chapter

Chapter 6 provides an overview of the health and socio-economic impacts of COVID-19 in South Africa. It reflects on lessons from previous financial crises, makes the case for a green stimulus policy, and reviews the R500 billion COVID-19 Rescue Package and the South

Africa Economic Recovery and Reconstruction Plan (ERRP). The chapter concludes with a review of potential financing options for a larger COVID-19 stimulus package.

6.1 COVID-19: Socio-Economic Impacts

The COVID-19 crisis sent shockwaves through the global economy with devastating health, socio-economic, and environmental impacts. By September 2021, the virus itself had infected over 219 million people, over 4.5 million lives had been lost, and it had placed extreme pressure on healthcare systems around the world (Worldometer, 2021; TIPS, 2020c; WHO, 2020; Etyang, 2020).

To curb the rate of infection and combat the virus globally, countries imposed varying degrees of national and/or regional lockdowns – primarily placing restrictions on people’s movement and economic activity – which have ultimately disrupted local and global supply chains. Subsequently, such actions have caused financial and socio-economic crises (Betti & Ni, 2020).

If the socio-economic impacts of the COVID-19 Pandemic present a glimpse into the future impacts of climate disasters²⁰ (which are expected to cause significant damage to productive capital, property, and infrastructure), then the fundamental question is: will we transition away from the pre-COVID-19 status quo to a

more inclusive, sustainable, and resilient economy that not only mitigates future disasters, but also enhances our adaptive capacity and resilience to them?

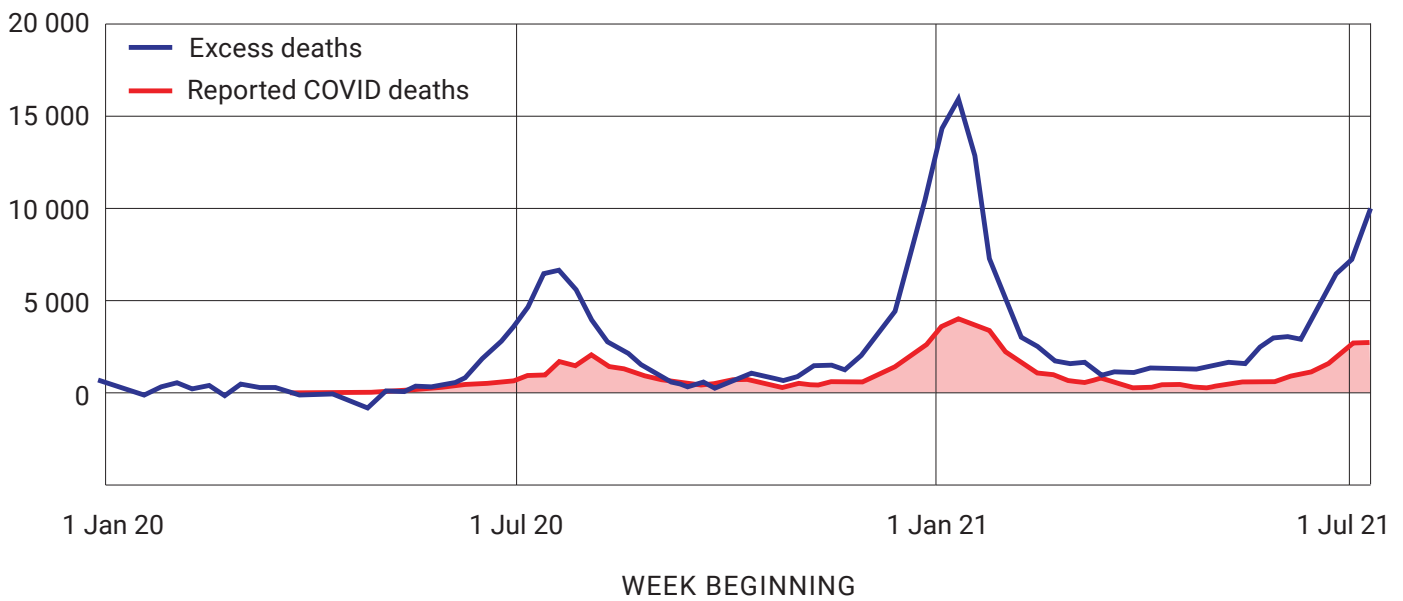
6.1.1 Health Impacts of COVID-19 in South Africa

The Pandemic is not only placing increased pressure on healthcare systems directly, with high infection and mortality rates associated with the virus itself (Etyang, 2020), but the Pandemic and associated lockdowns are also having significant indirect impacts on public health via a ‘multiplier effect’ (as indicated by excess mortality rates). An overwhelmed and severely under-resourced healthcare system that is unable to treat both COVID-19 patients and patients suffering from other existing co-morbidities, such as non-communicable diseases, is contributing to this apparent ‘multiplier effect’ (WHO, 2020; Etyang, 2020). It is assumed that people with existing co-morbidities may be avoiding necessary medical consultations out of fear of contracting the COVID-19 virus, and are thus not receiving the critical treatment that they need (TIPS, 2020c).

In turn, lockdowns and job losses might also be preventing people from accessing the treatment they need. Even high-income countries, with relatively well-resourced healthcare systems, are witnessing increased pressure on their healthcare systems, due to high COVID-19 infection rates (Etyang, 2020).

Global infections have increased beyond 219 million and the death toll continues to increase beyond 4.5 million (Worldometer, September 2021).

²⁰ Climate disasters can be understood as meteorological disasters that have been influenced by anthropogenic-induced climate change, such as severe hurricanes, droughts, floods and fires (Arp, 2020).



(Source: SAMRC, 2021, <https://www.samrc.ac.za/reports/report-weekly-deaths-south-africa>.)

Figure 6.1: South Africa's Excess Deaths and Reported COVID-19 Deaths

South Africa has emerged from its third wave of COVID-19 infections, with a total of over **1.9 million cases and more than 60 000 deaths** (Worldometer, 2021; Department of Health, 2021). As of 28 June 2021, the recovery rate in South Africa was lower than the global average (91%) at approximately 89% (Worldometer, 2021; Department of Health, 2021).

There is evidence to suggest that South Africa is also facing somewhat of a multiplier effect in terms of excess pressure on the healthcare system, as indicated by the excess in mortality rate (Figure 6.1). According to the South African Medical Research Council (SAMRC), deaths from natural causes (excluding trauma-related deaths, such as motor vehicle accidents), that were not directly attributed to COVID-19 infections, increased by approximately 7 500 deaths at the peak of the first wave and 15 000 at the peak of the second wave (SAMRC, 2021). This pattern is in line with international experiences in Europe, South America, and Asia. Some of the reported excess deaths are considered to be fatalities from unconfirmed COVID-19 cases, while others might be the result of people avoiding or not being able to access treatment and/or medication (TIPS, 2020c).

6.1.2 Socio-Economic Impacts of COVID-19 in South Africa

The COVID-19 Pandemic has had a unique economic impact in that it has simultaneously reduced supply (workers cannot go to work either directly due to infection or indirectly due to restrictions/lockdowns) and demand (consumers are self-isolating, in lockdown, or have lower disposable income due to job losses) for goods and services, both domestically and globally. The virus has impacted all sectors around the world, from tourism to manufacturing, research to agriculture (Letzig, 2020).

The economic outlook for South Africa is quite bleak, with the central challenges being large-scale job losses and lower incomes, which weigh down any economic recovery due to lower demand (TIPS, 2020c).

According to the South African Reserve Bank (SARB, 2020), real GDP decreased by 16% during the first wave of infections,²¹ equivalent to an annualised decline of 51%. The third quarter of 2020 saw the largest rebound in real GDP since quarterly records began in 1960, with an annualised rate of 66% (SARB, 2020).

²¹ The first wave of infections is closely aligned to the impact of COVID-19 between the first and second quarter of 2020.

However, despite such a rebound, and with the second wave of infections through the fourth quarter of 2020 and the first quarter of 2021, GDP is expected to decline once more (SARB, 2020). **GDP is only expected to return to 2019 levels by 2023 at best** (TIPS, 2020c).

Beyond the impacts on GDP, the economy also experienced an output gap of approximately 7.9% for the first three quarters of 2020, relative to the same period in 2019 (SARB, 2020). Unemployment surprisingly declined from 30.1% in the first quarter of 2020 to 23.3% in the second. However, due to the national lockdown, people who lost their jobs or who were already unemployed during that time, were unable to search for jobs and were, therefore, categorised as 'inactive' and not counted in the official unemployment rate.

The third quarter saw unemployment increase to 30.8%, while the fourth quarter saw unemployment increase further to 32.5% (SARB, 2020; Stats SA, 2020).

Inflation dropped to its lowest level since 2005, to 2% during the first wave of infections, but did not spread equally across consumer goods. Food prices, for example, increased by 4.5%, and as a result, have negatively impacted poorer households more so than affluent ones (TIPS, 2020c). The SARB is also concerned that administered prices, such as electricity prices,

will continue to increase inflation further, despite lower aggregate demand, effectively writing the perfect recipe for stagflation. This underscores the critical importance of transitioning to renewable energy sources (TIPS, 2020c). Inflation has since stabilised around 3.2% (SARB, 2020).

GLOBAL ECONOMIC IMPACT OF COVID-19

Without any physical damage to, or destruction of productive assets and infrastructure, the COVID-19 Pandemic is expected to **cost the global economy approximately US\$28 trillion (~R420 trillion) in lost output over 2020 and 2021** (Elliot, 2020; IMF, 2021). Other estimates suggest that global economic growth contracted between **3% and 6% in 2020** (CRS, 2020; WB, 2020a; IMF, 2021). This is despite the largest fiscal and monetary support programmes in human history, totalling approximately US\$12 trillion (~R180 trillion) in global government support (Elliot, 2020; IMF, 2021). In the long run, the crisis could leave deep scars across the global economy through lower levels of investment, fragmentation of global supply chains, and the erosion of human capital due to deaths, unemployment, and lost schooling (WB, 2020).

6.2 Lessons from Previous Crises

In general, when the economy is operating at close to full capacity, or during periods of growth, economic multipliers²² tend to be close to zero (DeLong et al., 2012; Hepburn et al., 2020). During crises or recessions, economic multipliers tend to be relatively high and can pull the economy out of crisis, if investment is directed to the right channels with high multipliers.

Depending on which economic theory countries or institutions subscribe to, governments can either employ austerity or expansionary measures. Austerity measures include decreased public spending to increase savings

and manage debt, which is in line with neo-liberal economic theory. This may be followed by a reluctance to invest and spend during a crisis due to high levels of uncertainty and concern about affordability, which prompts economic actors to take undesirable actions (DeLong et al., 2012; Hepburn et al., 2020). Such actions might include, laying off workers, reduced investment by businesses and governments, and reduced consumption by consumers. Banks may even reign in credit. Keynesian theory suggests that this can be a self-fulfilling strategy for delivering a weaker economy (with significant socio-economic impacts) through what is known as

²² Economic multipliers are broadly defined as economic factors that, when increased or changed, cause increases or changes in many other related economic variables.

the 'Keynesian multiplier'²³ and 'accelerator'²⁴ effects (DeLong et al., 2012; Hepburn et al., 2020).

In contrast, if governments employ a counter-cyclical strategy, wherein expansionary policies are employed during an economic crisis or recession, Keynesian economic theory suggests the negative reinforcing feedback loop may be arrested (DeLong & Summers, 2012; Hepburn et al., 2020). Employing expansionary policies during economic slowdowns have been found to generate economic multipliers of between 1.5 and 2.5 (Auerbach & Gorodnichenko, 2012; Blanchard & Leigh, 2013), and even as high as 3 in some cases (IMF, 2014; Mourougane et al., 2016; Hepburn et al., 2020). Increases in government spending is said to be more effective for driving economic growth when compared to tax reductions, and may deliver higher multipliers, while direct household support programmes, such as the COVID-19 relief grant, are also said to perform well (Hepburn et al., 2020). Reducing interest rates also provides an opportunity for targeted investments to drive higher economic multipliers (Hepburn et al., 2020). However, expansionary policies might require governments to buy back debt from the financial sector, and take on more public debt, which increases the debt-to-GDP ratio, increasing the cost of debt, and in the worst-case scenario, leading to a sovereign debt crisis.

With that said, no crisis is the same and neither are the economies on which they impact. Hepburn et al. (2020)

suggest that COVID-19 expansionary policies might have lower multipliers, compared to the Global Financial Crisis (GFC) in 2008, for example. Given the high degree of uncertainty around COVID-19, economic actors might be precautionary in their behaviour and reduce their spending. In addition, fear of the virus may also result in reduced social activities and travel, making it difficult to target public expenditure in areas with a high marginal propensity to consume, both reducing consumption multipliers. Economic expectations shaped by health risks, rather than financial concerns, may also make COVID-19 stimulus strategies less effective (Stiglitz, 2020; Hepburn et al., 2020).

Despite these potential differences, there may still be useful lessons from previous crises, especially with respect to climate and environmental impacts of previous stimulus strategies. Hepburn et al. (2020) reviewed 196 fiscal recovery policies that were implemented after the GFC and found that only 63 could be considered as 'green', while the remainder were either 'colourless' or 'brown'. The review found that green stimulus policies had several advantages and co-benefits over traditional brown stimulus policies. The key lesson here being, that any economic stimulus policies need to be green and drive sustainable economic development, rather than reinforce the dependence on unsustainable economic development.

6.3 Green versus Brown Economic Recovery Policies

Implementing economic recovery policies for COVID-19 can have significant future impacts, depending on the design of the interventions. If an economic recovery policy follows a business-as-usual approach, with more brown interventions, it risks locking the economy into an unsustainable development trajectory (Hepburn et al., 2020; Hallegatte & Hammer, 2020; Barbieri et al., 2021). While brown recovery policy interventions might be attractive in the short-run, and relatively easier to

implement, their long-term impacts on the environment and society do not necessarily justify short-term gains. Brown stimulus approaches have the potential to increase average global temperatures by 3 °C or more, which promises to deliver future crises with potentially similar socio-economic impacts, as observed with the COVID-19 Pandemic, if not worse (Hepburn et al., 2020; Zenghelis et al., 2020; WWF, 2020; OECD, 2020; Barbieri et al., 2021).

²³ The Keynesian Multiplier asserts that an increase in private consumption expenditure, investment expenditure, or net government spending, will increase GDP by more than the initial amount of the increase.

²⁴ The accelerator effect is a Keynesian concept, which stipulates that an increase in national income, as measured by GDP, would result in a proportional increase in capital investment spending.

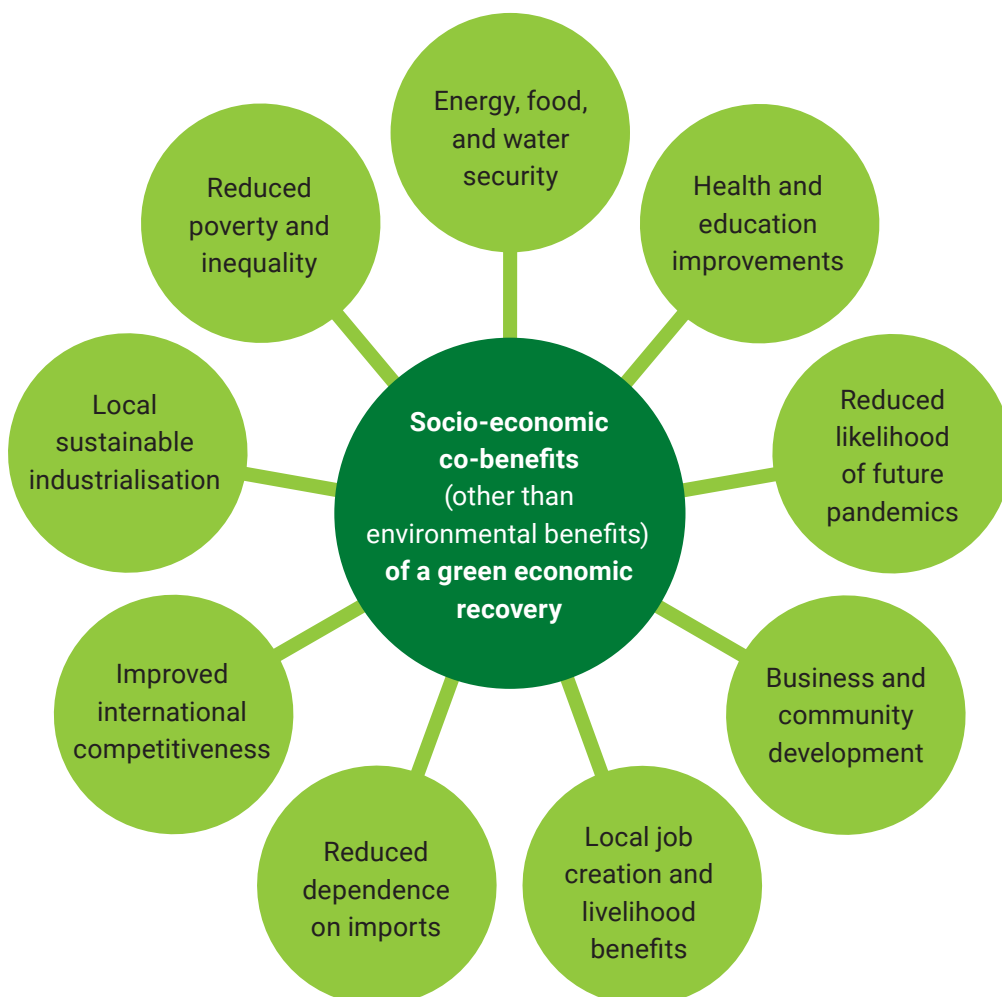
Instead, economic recoveries should prioritise sustainable, green stimulus approaches and interventions. These can support an inclusive green economic transition and address developmental and socio-economic challenges, particularly in South Africa, while simultaneously decoupling economic growth from environmental degradation (Hepburn et al., 2020; Fleishman et al., 2020; TIPS, 2020b; WWF, 2020; Barbieri et al., 2021). Such a green approach will not only provide long-term value generation and mitigate future disaster risks, it will also provide a range of socio-economic co-benefits and build a more equitable and resilient society (Hepburn et al., 2020; Fleishman et al., 2020; TIPS, 2020b; Barbieri et al., 2021).

These co-benefits are, however, dependant on how and where the recovery interventions are directed. Given South Africa’s vulnerability to climate change, various

transitional risks and increasing unemployment, poverty, and inequality challenges, a green recovery approach presents a significant opportunity to embrace and drive fundamental and lasting change.

A green recovery in South Africa can address the country’s developmental challenges while simultaneously reducing the economy’s environmental impact and improve its resilience to climate change (TIPS, 2020b; Barbieri et al., 2021). Table 6.1 provides a summary of the advantages and disadvantages of both green and brown economic recovery policies.

For every US\$1 million invested in renewable energy, there are **three times as many jobs** created compared to the same investment in fossil fuels (WWF, 2020).



(Source: TIPS, 2020b; WWF, 2020; Barbieri et al., 2021.)

Table 6.1: Brown vs Green Recovery Policies: Advantages and Disadvantages

	Advantages	Disadvantages
Brown recovery policies	They are relatively easier and quicker to implement given existing institutional frameworks, knowledge, finance channels, and expertise.	They reinforce economic dependencies on fossil fuels, exacerbate climate change, and lock-in to unsustainable economic development.
	They provide employment protection in carbon-intensive and environmentally-impactful industries.	They increase contribution to ecosystem degradation, unsustainable natural resource consumption, waste generation, and biodiversity loss.
	Deregulation of environmental standards makes investment and implementation of brown strategies quicker and easier.	They increase health impacts from fossil fuels, climate change, and future pandemics.
	They provide more certainty regarding financial risks and outcomes of brown investments.	They increase risk of future disasters from environmental degradation, such as floods, droughts, fires, and pandemics.
	They are relatively higher short-term gains.	They erode natural capital and ecosystem services upon which economic development and human well-being depends.
Green recovery policies	They decouple economic development from GHG emissions and environmental degradation for sustainable development.	They are potentially more challenging to implement in the short-term due to uncertainty, lack of institutional frameworks, and limited awareness about where and what to invest in for highest returns and impact.
	They protect the value of natural capital, improves ecosystem functioning and resource-use efficiency, minimise waste and pollution, and enhances biodiversity and climate resilience.	Lack of bankable projects and a track record of sustainable finance, lead to higher perceived risks, technology uncertainty, and potentially higher start-up costs.
	They enhance job creation, business development and community upliftment, which contributes to poverty and inequality reduction and stronger social cohesion.	Sustainable conditionalities can potentially be a barrier to accessing loan and credit facilities.
	They provide health benefits and education improvements.	Environmental regulations and standards can slow the speed of implementing sustainable projects and investments.
	They improve energy, food, and water security.	Present potential employment impacts in carbon-intensive and high environmental impact sectors.

(Source: Portugal-Pereira et al., 2013; Bollen, 2015; Bryan et al., 2016; Andersen, 2017; Quam et al., 2017; Wustemann et al., 2017; Hepburn et al., 2020; Karlsson et al., 2020; Zenghelis et al., 2020; TIPS, 2020b; WWF, 2020; Barbieri et al., 2021.)

THE CASE FOR A GREEN ECONOMIC RECOVERY IN SOUTH AFRICA

When designing economic recovery policies, there are several factors to consider, including positive social and environmental impact; long-run economic multipliers; speed of implementation; contributions to the productive asset base and national wealth; and affordability (Hepburn et al., 2020; Ramey, 2019; OECD, 2020; WWF, 2020).

What to aim for in green economic recovery policies and packages:

- Aim to stabilise expectations, steer investment into productive channels, and restore confidence.
- Channel investment into a productive and balanced portfolio of sustainable social, human, physical, and natural capital, that is consistent with the SDGs and the Paris Agreement (Hepburn et al., 2020; Zenghelis et al., 2020).
- Focus on protecting and enhancing natural capital, including biodiversity; ecosystems and productive soils; clean air and water; and climate change mitigation and adaptation (Hepburn et al., 2020).
- Place climate at the centre of the green recovery policies – this has several co-benefits, such as improved resource-use efficiency; reduced waste and pollution; job creation; and improved energy, water, and food security.
- Ensure that they can be implemented relatively quickly, such as commercial and residential energy-efficiency. Energy-efficiency retrofit programmes are shovel-ready and employ a significant amount of blue-collar labour, which is critical for South Africa.
- Natural capital spending is quick to implement, such as expanding parkland areas, afforestation, investment in ecological infrastructure, and enhancing urban and rural ecosystems. Again, it provides several opportunities for lower-skilled labour, while easily meeting social distancing requirements (Houser et al., 2009; Bowen et al., 2009; Hepburn et al., 2020). It also allows for the implementation of Nationally Determined Contributions (NDCs) under the Paris Agreement, and so provides shovel-ready investment opportunities that are aligned with international climate goals (Hepburn et al., 2020; WWF, 2020).

“As we work with our social partners to develop an urgent economic recovery programme, we are determined that we should not merely return to where we were before the Pandemic struck. We are instead looking at actions that will build a new, inclusive economy that creates employment and fosters sustainable growth”

President Cyril Ramaphosa (The Presidency, 2020).

6.4 Responding to COVID-19: South Africa's Economic Recovery Policies

South Africa's COVID-19 response has broadly followed a three-phased approach (RSA, 2020a):

- **Phase 1:** The on-going implementation of **short-term health responses** to save lives and curb the spread of the virus. This includes interventions, such as national lockdowns, mass screening and testing programmes, and other COVID-19 restrictions.
- **Phase 2:** Interventions to support the economy while also controlling health risks. This phase can be understood as a **short- to medium-term response** and includes interventions, such as the reprioritisation of the National Budget and the R500 billion COVID-19 Rescue Package to support workers and business.
- **Phase 3:** A **medium- to long-term response**, aimed at reconstructing and transforming the economy into a sustainable, resilient, and inclusive economy (RSA, 2020a).

The following provides an overview of South Africa's medium- and long-term responses, specifically focusing on the R500 billion COVID-19 Rescue Package and the Economic Reconstruction and Recovery Plan (ERRP). It concludes with a review of potential finance opportunities for a COVID-19 economic stimulus.²⁵

6.4.1 A Review of South Africa's R500 Billion Rescue Package

In April 2020, the President announced a R500 billion ($\approx 10\%$ of GDP) COVID-19 Rescue Package for South Africa, which included both tax relief measures and 'reprioritised spending' across different priority areas, as outlined in Table 6.2 (IEJ, 2020b; Isaacs, 2020). To give effect to the rescue package, the National Budget was restructured and a Supplementary Budget was tabled in June 2020.

A SNAPSHOT OF GLOBAL STIMULUS POLICIES

In response to the impacts of COVID-19 and national lockdowns, governments around the world have implemented various significant monetary and fiscal recovery policies of approximately US\$10 trillion²⁶ (Cassim et al., 2020).

- The USA's GDP declined by an annualised rate of 33% in the second quarter of 2020 (IMF, 2020a), with an estimated decline of between 4% and 10% for the fourth quarter of 2020 (CRS, 2020). In response, the USA passed three main stimulus policies totalling roughly US\$2.8 trillion ($\approx R45$ trillion) (Alpert, 2020), or approximately 12% of total GDP (IMF, 2020a; Cassim et al., 2020).
- The **European Union (EU)** approved a €750 billion ($\approx R14$ trillion) fiscal stimulus package (Dendrinou et al., 2020; IMF, 2020a; Alpert, 2020) to address an estimated decline in real GDP for 2020, of between 8% (CRS, 2020) and 15%, in the worst-case scenario (Willcox, 2020).
- The **United Kingdom (UK)** forecasts a 30% reduction in GDP for the first half of 2020 (CRS, 2020) and announced various stimulus measures (IMF, 2020a) equating to approximately 14.5% of GDP (Cassim et al., 2020).
- Emerging markets and developing economies are also implementing significant stimulus policies (Figure 6.2), such as **Malaysia** (19.1% of GDP), **Thailand** (8.5% of GDP), **China** (7.6% of GDP), **India** (2.8% of GDP), and **Brazil** (1.6% of GDP).

(Source: ODI, 2020; and IEJ, 2020a.)

²⁵ Since South Africa's economic recovery has followed an austerity approach, with budget reprioritisations, the report distinguishes between 'recovery' and 'stimulus'. Recovery refers to any economic interventions aimed at curbing the impacts of COVID-19. Stimulus refers to an additional or net increase in non-interest spending by government, aimed at stimulating the economy to curb the impacts of COVID-19.

²⁶ Information and data on country stimulus policies varies depending on whether both fiscal and monetary measures are combined in estimating total value of stimulus responses.

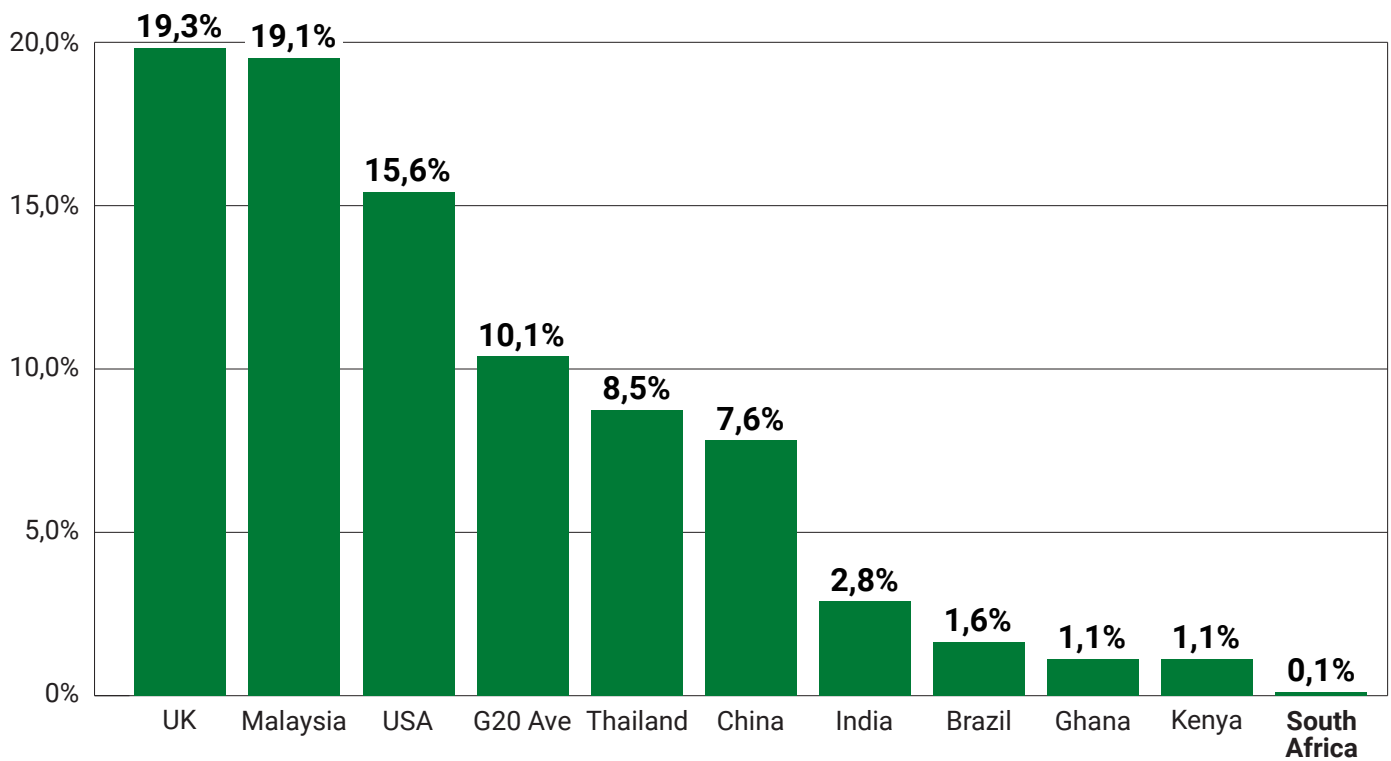


Figure 6.2: Comparison of Countries’ Stimulus Allocation as a Percentage of GDP

The COVID-19 Rescue Package only represents a net increase in non-interest spending (or new government spending) for the financial year 2020/21 of R36 billion, or less than 1% of GDP (IEJ, 2020b). The critical point here is that it is **new government spending, rather than budget reprioritisations and tax reliefs**, that provide higher economic multipliers for recovery (DeLong et al., 2012; Hepburn et al., 2020). Most of the COVID-19 related expenditure is funded through the suspension of baseline allocations and reprioritisations, with further plans to reduce public spending over the next two years (2020–2022) by R230 billion (IEJ, 2020b). Table 6.2 summarises the original R500 billion Rescue Package and compares it to what has been delivered and how it was funded.

The COVID-19 Rescue Package does not necessarily represent an economic stimulus package with new spending (Isaacs, 2020). In terms of revenue, R130 billion is being funded from budget reprioritisations, which represents expenditure already planned for. The budget reprioritisation, therefore, does not lead to a net long-term benefit to the economy (Isaacs, 2020), especially if it results in underfunding for long-term capital

expenditure elsewhere, such as public transport and other infrastructure. Even before the Pandemic, during the 2020 February Budget Speech, the Finance Minister announced that funding for public transport projects in Buffalo City, Mbombela and Msunduzi municipalities would be cut (NT, 2020). Reprioritisations of such funding for emergency COVID-19 relief is justified, however it does not amount to a COVID-19 ‘stimulus’ package.

From an expenditure point of view, the support for businesses and households in the form of R70 billion tax relief and R200 million in loan guarantees, does not amount to additional or new government spending (IEJ, 2020b; Isaacs, 2020). While such measures do provide critical short-term support to households and businesses in the short-term, the long-term economic multipliers of such interventions are generally lower than increases in direct government spending (DeLong et al., 2012; Hepburn et al., 2020).

From the original R500 billion, only R230 billion is left for government spending – approximately 4.5% of GDP (IEJ, 2020b; Isaacs, 2020), and R130 billion of this is sourced from budget reallocations, and therefore

does not represent a net increase in spending. Another R100 billion was sourced from the Unemployment Insurance Fund (UIF), which by December 2020, had paid an estimated R55.6 billion to approximately 1.1 million applicants²⁷ (IOL, 2020). Nonetheless, the UIF funds used for the COVID-19 Rescue Package do not necessarily imply additional fiscal burdens (IEJ, 2020b; Isaacs, 2020).

The International Monetary Fund (IMF) approved a loan to South Africa of US\$4 billion (≈R69 billion) for additional COVID-19 support. It is a low-interest loan that respects South Africa's decisions on how best to utilise it, without the strict conditionalities of traditional IMF loans (EWN, 2020). However, related information of how this loan will contribute to different aspects of South Africa's COVID-19 Rescue Package, is not stipulated.

Table 6.2: Summary Analysis of South Africa's COVID-19 Rescue Package

COVID-19 Rescue Package		What was promised	What was received	Funding sources
1	Social security support	R50 billion	Cut to R41 billion	Only R25 billion in new spending, the rest sourced from budget reallocations.
2	Job protection and creation	R100 billion	Cut to R6 billion for 2020/2021	Mostly funded from budget reallocations, including existing funding for small business support and unemployment reduction.
3	Healthcare interventions	R20 billion	Increased to R21,5 billion	Only R2.9 billion in new funding, with the remainder coming from reprioritisation of existing spending.
4	Wage support	R40 billion	No indication of changes	Funded from Unemployment Insurance Fund (UIF) surplus, no new fiscal spending. Only 30% of workforce supported with 60% of budget used.
5	Municipality support	R20 billion	Allocation remains	R11 billion increase in local government funding; R9 billion in reallocation of existing municipal budget expenditure.
6	Tax relief	R70 billion	Current shortfall of R26 billion. Unclear what portion of this is actual COVID-19 related tax relief.	
7	Credit guarantee scheme	R200 billion	Remains in place but only about R12 billion accessed.	Guaranteed by National Treasury.
8	Tourism Equity Fund	R1.2 billion	Launched on 26 January 2021.	R540 million from Department of Tourism; R120 million from the Small Enterprise Finance Agency; and R594 million from South Africa's major banks.

(Source: Adapted from IEJ, 2020b; and Daniel, 2021.)

²⁷ Applicants refers to both businesses and individuals who applied for COVID-19 relief grants from the UIF.

6.5 South Africa's Economic Recovery and Reconstruction Plan (ERRP)

The ERRP also follows a three-phased approach:

- **Phase 1: Engage and Preserve:** Responding to the health impacts of COVID-19.
- **Phase 2: Recovery and Reform:** Restoring economic activity while also managing health risks.
- **Phase 3: Reconstruct and Transform:** Building a 'sustainable, resilient and inclusive economy' (RSA, 2020a, p. 3).

The ERRP will pursue an infrastructure-led economic reconstruction and recovery pathway, with aggressive investments in infrastructure as a means of stimulating various economic sectors.

To give effect to the Plan, **nine priority intervention** areas have been identified:

- Aggressive infrastructure investment;
- Employment-orientated strategic localisation, reindustrialisation, and export promotion;
- Energy security;
- Support for tourism recovery and growth;
- Gender equality and economic inclusion of women and youth;
- Green economy interventions;
- Mass public employment interventions;
- Strengthening food security; and
- Macro-economic interventions.

The Plan also identifies a number of 'key enablers' and 'structural reforms' that will support its implementation. These are summarised in Table 6.3 and Table 6.4.

While the Plan identifies 'green economy interventions' as one of the priority areas, there is certainly scope to implement such interventions across the other priority areas. For example:

- Energy security will require more renewable energy interventions, including renewable electricity generation, biofuels, and green hydrogen.
- Food security will also require interventions in terms of both climate change mitigation and adaptation, such as climate smart agriculture.

Therefore, green economy interventions should ideally be a cross-cutting element of the ERRP, rather than a standalone priority area. Despite this potential shortfall, it is promising to have green economy interventions included in the ERRP. The following provides an overview of those interventions, as described in the ERRP.

6.5.1 ERRP Green Economy Interventions

The ERRP acknowledges the co-benefits of a green economic transition in addressing South Africa's developmental challenges, while also driving economic competitiveness and supporting energy, food, and water security (RSA, 2020a).

It also acknowledges catalytic linkages with other sectors. For example, the ERRP speaks to how green economy interventions in agriculture can strengthen efforts towards resilient and drought-resistant crops, and in turn contribute to food security and the sector's competitiveness (RSA, 2020a). However, key enablers required to realise the transition to a green economy also need to be considered.

Improving energy and water-efficiency will be the focus of South Africa's green agenda under the ERRP. These efficiency interventions will be initiated by retrofitting public and private buildings, before being expanded to human settlements, clinics, and schools (RSA, 2020a). It is envisioned that energy-efficiency programmes will build local, labour-intensive industry and small businesses, and support skills development and income generation. The ERRP also speaks about ensuring a just transition. It specifically identifies retrofitting old coal-based power stations, such as in Mpumalanga, with solar power to save jobs and sustain livelihoods in at-risk regions (RSA, 2020a).

Table 6.3: Key Enablers Identified in the ERRP

Key enablers	Structural reforms
<ul style="list-style-type: none"> ▪ Resource mobilisation ▪ Regulatory changes, a supportive policy environment and enabling conditions for ease of doing business ▪ Building a capable state ▪ Social compacting ▪ Skills development ▪ Economic diplomacy and further integration into the African continent 	<ul style="list-style-type: none"> ▪ Modernising and reforming network industries and associated state-owned enterprises ▪ Re-orienting trade policies and pursuing greater regional integration to boost exports, employment, and innovation ▪ Lowering barriers to entry to make it easier for businesses to start, grow, and compete ▪ Supporting labour-intensive sectors, such as tourism and agriculture, to achieve more inclusive growth ▪ Creating greater levels of economic inclusion, including through addressing high levels of economic concentration ▪ Addressing the weak job-creating capacity of the economy; boosting education and skills development ▪ Promoting greater beneficiation of raw materials ▪ Addressing racial, gender, and geographical inequalities which hamper deeper economic growth and development

(Source: RSA, 2020a, p. 4.)

6.5.2 Modelling the Potential Impacts of the ERRP

A report by Cambridge Econometrics and PAGE (Barbieri et al., 2021) modelled the potential socio-economic and environmental impacts of a 'conventional policies' scenario²⁸ currently in the ERRP, against a 'green push'²⁹ scenario. A green push scenario is expected to deliver almost 5% more GDP growth by 2030 relative to a conventional policies scenario. Unemployment is expected to be approximately 0.5% lower (by 2030) for a green push scenario relative to a conventional policies scenario. GHG emissions are estimated to be approximately 23% lower for a green push scenario relative to a conventional policies scenario (Barbieri et al., 2021).

Therefore, implementing a more ambitious green recovery through the ERRP, could promote higher economic growth, job creation, and environmental sustainability, bringing GDP back to where it might have been in the absence of COVID-19, by 2030. Job losses in a low-carbon transition, while requiring careful management through a just transition, could be offset by new job creation in low-carbon sectors, with a net positive gain in jobs (Barbieri et al., 2021).

28 The 'conventional policies' scenario is defined as, "R835 billion over 10 years which includes interventions such as infrastructure investment, localisation of production, subsidies for the tourism sector and food vouchers" (Barbieri et al., 2021).

29 The 'green push' scenario is defined as, "a stronger push towards renewables than is envisaged in the ERRP: early decommissioning of coal-based power generation and an additional R300 bn of private financing to the power sector" (Barbieri et al., 2021).

The ERRP identifies other green economy 'high impact priority areas':



Biodiversity economy infrastructure roll-out, inclusive of protected areas.



Support for SMMEs and cooperatives to take advantage of opportunities in the green economy.



Implementation of exclusion applications for 48 sites for ash, gypsum, slag, and biomass beneficiation.



Support for small grower farmers through Public, Private Partnerships (PPPs) in forestry, including in state plantations.



Support for the Traditional Authorities Demonstration Project.



Integration of waste pickers and revitalisation of buy-back centres.



Section 18 industry waste management plans (Extended Producer Responsibility Regulations).



Intermediary solutions for aquaculture products, and revitalisation and upgrade of existing government hatcheries and research centres.

6.6 Financing a Green Recovery

There are a number of ways for government to finance a green stimulus policy, from increased borrowing and debt to quantitative easing (QE). South Africa's current stimulus package is largely funded by National Budget reprioritisations instead of new spending and new borrowing (Willcox, 2020; IEJ, 2020a; IEJ, 2020b). Not responding to the crisis with sufficient new spending, risks putting the economy onto a dangerous downward spiral, with continued unemployment, low GDP growth,³⁰ and increasing debt risks.

6.6.1 Borrowing from the International Monetary Fund (IMF) and World Bank

In 2020, the IMF approved a US\$4 billion (≈R69 billion) loan to South Africa (EWN, 2020). This increased the country's dollar debt by 72%, to a total of US\$12.4 billion, and weakened its fiscal position. While it is acknowledged that South Africa can ill-afford to take on too much additional public debt to finance a green stimulus, it must be noted that the debt portfolio consists of little debt, denominated in foreign currency – only R334 billion out of R3.3 trillion (Willcox, 2020).

Therefore, despite the threat to the economy's fiscal position from borrowing from the IMF, and other institutions like the World Bank and BRICS Bank, South Africa has some breathing space in terms of its dollar debt level. In addition, South Africa's foreign exchange reserves of approximately US\$54 billion (as of February 2020) will easily cover the increase in dollar borrowing (Willcox, 2020).

6.6.2 Domestic Borrowing

South Africa has little room to increase domestic borrowing for financing a green stimulus strategy. In addition, long-term bond yields increased dramatically since the Pandemic began, to around 12% in early March 2020, eventually settling at approximately 10% (Willcox, 2020). The concern is that the cost of borrowing domestically would be very expensive in the long-run, and

2030 under a green push scenario:

5% more GDP growth;

0.5% lower unemployment; and

23% lower GHG emissions.

should government announce an increase in domestic borrowing, long-term bond rates would increase even more (Willcox, 2020).

Short-term borrowing would be cheaper, especially if the SARB continues to decrease the repo rate. Selling short-term bonds to the private sector and SARB can potentially raise enough money to finance the tax relief outlined in the COVID-19 Rescue Package (IEJ, 2020a; Willcox, 2020).

While the point remains that there is not sufficient space to finance a green stimulus strategy from an increase in domestic borrowing alone, it's not to say that a diversified approach with some domestic borrowing is out of the question. Sustainable domestic borrowing using innovative mechanisms, such as green bonds or climate bonds, could supplement a green stimulus. This has the added benefit of directing finance into sustainable solutions and the resulting debt would at least be environmentally-sustainable, or green debt, rather than brown debt.

6.6.3 COVID-19 Solidarity Bonds

Government could potentially issue COVID-19 solidarity bonds to finance the green stimulus (Willcox, 2020; IEJ, 2020a). These bonds differ from normal bonds in that they could have a longer or shorter duration and are issued at cheaper rates with better terms than normal bonds.

According to an IEJ paper (2020a), if government decides to issue COVID-19 solidarity bonds, then the Public Investment Corporation (PIC) should purchase an initial R50 billion worth of such bonds, which can be used

³⁰ The debt-to-GDP ratio and national credit ratings (and therefore the cost of borrowing) are influenced by economic growth, amongst other variables. If economic growth does not increase, then the debt-to-GDP ratio will worsen without having taken on more public debt to finance an economic recovery. Therefore, austerity in a time of crisis also carries debt risks.

to support business rescues. The private sector should also play its part. If large investment and insurance companies, pension funds, and unit trusts spent just 2% of their assets on such a COVID-19 special bond, it could raise R140 billion for a green stimulus policy (IEJ, 2020a). However, special bonds still have the same disadvantages as normal bonds in that they increase domestic borrowing and debt levels, which in South Africa, are already very high (Willcox, 2020).

6.6.4 A Solidarity Wealth Tax

South Africa is one of the most unequal societies in the world, where the richest 10% of the population own

about 86% wealth. Therefore, implementing a solidarity wealth tax and even potentially increasing income taxes on those in the upper tax brackets would provide much needed additional financing (Chatterjee et al., 2020; Willcox, 2020).

The main advantage of a wealth tax or increasing income tax rates for high earners is that it would be progressive and impact a smaller number of taxpayers (Willcox, 2020). However, the disadvantage of any tax is that it will increase the contraction in demand in an already demand-constrained economy (Willcox, 2020). But the degree of impact on demand needs further investigation as one might assume that the rich spend their money on



imported luxury goods, and therefore such consumption does not contribute to South Africa's GDP.

In South Africa, the richest 10% of the population own about 86% of the wealth.

6.6.5 Quantitative Easing (QE)

Simply put, quantitative easing (QE) involves the purchasing of government bonds and other securities by a central bank, using the money it has for that purpose (Willcox, 2020). Central banks can either purchase bonds directly from government or in the secondary market. The choice is often determined by laws or regulations in a particular country. Economically, there is no difference, the impact is the same.

Financing a stimulus policy through QE is essentially free, and is therefore a very attractive financing solution. In addition, QE tends to have a positive impact on government's debt portfolio, pushing bond yields down and improving the country's fiscal position (Willcox, 2020). QE can be paired with the roll-out of innovative sustainable financing mechanisms, such as issuing COVID-19 solidarity bonds, and a host of different green bonds linked to climate change, circular economy, and ecological infrastructure.

There are, however, valid concerns over the use of QE, mostly linked to the risk of hyperinflation. While South Africa's inflation rate was hovering at 3.2% (SARB, 2021) as of January 2021, and well within the SARB's inflation target, it would be prudent to build in contingency plans. For example, QE should be carried out in roughly R30 billion purchases each week, and if

IDEALLY, HOW BIG SHOULD A STIMULUS BE?

Any fiscal stimulus policy typically needs to offset most of the **output gap**³¹ resulting from a given crisis. This, in turn, should also encourage increased spending from the private sector to make up the remainder of what's needed, as measured by the fiscal multiplier (Willcox, 2020). The fiscal multiplier for South Africa is estimated at 1.68, implying that a **stimulus package of R1 billion will grow the economy by R1.68 billion and create 6 900 jobs** (Sibeko & Isaacs, 2020). A **stimulus package of R500 billion in new government spending (10% of GDP) would stimulate economic growth by over R800 billion with almost 3.5 million new jobs** (Sibeko & Isaacs, 2020).

The exact size of the output gap, and the size of the stimulus required, is also uncertain. While it is difficult to accurately know what the output gap will be, the risk of implementing an incorrectly sized stimulus policy is asymmetric. The consequences from implementing a stimulus policy that is too small are far worse than implementing one that is too big (Willcox, 2020). **If the stimulus is too small or insufficient, the economy could remain demand-constrained for years**, setting the economy on a dangerous downward spiral of reducing household

wealth and increasing levels of unemployment, inequality, and poverty (Willcox, 2020). On the other hand, **if the stimulus policy is too large it would risk increasing inflation, and potentially even create debt risks.**

South Africa's GDP declined by 7.9% over the first three quarters in 2020, relative to the same time period in 2019 (SARB, 2020). However, the full impact of COVID-19 could reduce GDP by between 10% and 16%, with an output gap as high as 24% of GDP, according to some estimates (Willcox, 2020).

The COVID-19 Rescue Package of R500 billion, which is based on an output gap of R300 billion (5.7% of GDP) is potentially an insufficient recovery policy.

This picture is made worse if one considers that the original R500 billion Rescue Package effectively only represents an increase in new non-interest spending of R36 billion, or less than 1% of GDP (IEJ, 2020b). If the output gap for the first three quarters of 2020 was 7.9% (compared to the same time period in 2019), then a stimulus of **new, non-interest government spending of about R410 billion is required** (IEJ, 2020a). This is just to get the economy back to where it was in 2019, never mind where it might have been in the absence of COVID-19.

31 The output gap is essentially the contraction of GDP as a result of economic slowdown.

inflationary pressure increases, then this amount can be reduced, stalled, or stopped altogether (Willcox, 2020). In the worst-case scenario, the SARB could sell bonds, effectively reversing the impact of QE, and reducing liquidity in the market. Alternatively, the SARB could start paying interest on private bank reserves to encourage banks to hold excess reserves, reducing the money supply once again. The USA Federal Reserve followed such a strategy to offset inflation from QE after the 2008 financial crisis (Willcox, 2020).

Several other countries have, or are using QE strategies, as summarised in Table 6.4. Generally, most countries only implement QE as a last resort when there is no more policy space to reduce interest rates, for example. However, countries such as Brazil, India, Philippines, Colombia, and Turkey, are using QE despite having policy space and a positive inflation rate. According to Gali (2019), fiscal multipliers tend to be larger when QE is implemented with positive inflation rates.

Lessons from Japan suggest that even after five years of QE, although profitable, companies were still over-indebted and remained focused on reducing their debt levels (Willcox, 2020). This meant that QE had little impact on inflation, as most of the QE funding remained as excess reserves in the Bank of Japan. South Africa might well find itself in a similar position, with companies desperate to pay off debts, following the Pandemic. Therefore, QE could prove a valuable source of finance for a green stimulus, with potentially little impact on inflation (Willcox, 2020). However, this requires deeper analysis.

All potential funding sources for a green stimulus in South Africa need to be explored and used collectively to balance their advantages and disadvantages (Table 6.5). As with any well-balanced investment portfolio, the South African government should spread their funding risks across various mechanisms.

Table 6.4: Countries Implementing Quantitative Easing (QE)

Country	Inflation rate (2019)	Current policy rate (equivalent to the repo rate in South Africa)
Australia	1.6	0.25
Brazil	3.7	3.0
Canada	1.9	0.25
Chile	2.3	0.5
Colombia	3.5	6.25
European Union (EU)	1.9	-0.5
Iceland	3.0	1.75
India	4.5	4.4
Israel	0.8	0.1
Japan	1.0	-0.1
New Zealand	1.6	1.0
Norway	2.2	0.25
Philippines	2.5	3.75
South Africa	3.2	3.5
South Korea	0.4	0.75
Sweden	1.7	0
Thailand	0.7	0.75
Turkey	15.2	8.75
United Kingdom (UK)	1.8	0.1
United States (US)	1.8	0-0.25

(Source: Willcox, 2020.)

The USA purchased US\$2.3 trillion of assets between March and December 2020, equivalent to the SARB purchasing R500 billion of assets (Willcox, 2020).

Table 6.5: Summary of the Advantages and Disadvantages of Potential Funding Sources for a Green Stimulus

Potential funding source	Advantages	Disadvantages
Increased foreign borrowing	South Africa has substantial foreign exchange reserves to cover the increase in foreign debt.	It increases foreign debt and debt servicing costs, and there are potential conditionalities from IMF and World Bank.
Increased domestic borrowing	If this occurs through sustainable finance mechanisms, such as green bonds, it would target domestic debt into green rather than brown channels.	South Africa has little room for more domestic borrowing, and the cost of domestic debt would increase.
COVID-19 solidarity bonds	These bonds could generate significant finance for COVID-19.	Same disadvantages as domestic borrowing.
Solidarity wealth tax	This could generate significant additional tax revenue. As 10% of the population own about 86% of the wealth, a wealth tax could be considered more progressive than other tax increases.	Any tax increases the contraction in demand in an already demand-constrained economy.
Quantitative easing (QE)	QE is essentially free and tends to have a positive impact on government's debt portfolio, pushing bond yields down and improving the country's fiscal position. In addition, if it targets COVID-19 solidarity or green bonds, it can direct finance into sustainable channels.	There is a risk that QE can result in hyperinflation, if not managed appropriately.



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6.7 Recommendations

6.7.1 Ideally Implement a Larger Economic Stimulus

The R500 billion COVID-19 Rescue Package, which is based on an output gap of R300 billion (5.7% of GDP), only represents an effective increase in new non-interest spending of R36 billion (less than 1% of GDP). This can be regarded as an insufficient stimulus policy to foster the level of growth required to address the impacts of COVID-19 and catalyse a just transition. Assuming an output gap of about 8% of GDP, South Africa would need a minimum economic stimulus (of new government spending) of approximately R410 billion (IEJ, 2020a), to respond appropriately to both the COVID-19 and socio-economic crises.

A green economic stimulus policy can address South Africa's developmental and socio-economic challenges while simultaneously supporting an inclusive green economic transition, and decouple economic growth from environmental degradation. Such a green stimulus will not only provide long-term value generation and mitigate future disaster risks, but will also build a more resilient society and provide a variety of socio-economic co-benefits.

6.7.2 Mainstream Green Economy Interventions Throughout the ERRP

While the ERRP identifies green economy interventions as a key priority area, it is unclear how such interventions might be mainstreamed across other priority interventions. There is a risk that an infrastructure-led recovery might overshadow any positive gains of isolated green economy interventions, if they are not mainstreamed across the broader ERRP. It is therefore recommended, that the ERRP identifies green

interventions as a cross-cutting element for each and all the other priority interventions of the ERRP. To enhance the success of the ERRP, it is further recommended that green economy interventions are also included and aligned to Sectoral Master Plans and South Africa's Nationally Determined Contribution (NDC). Investment must be diverted away from fossil fuel infrastructure and towards green economy interventions, while sustainable public procurement (SPP) can support the greening of the recovery itself by attaching sustainable and inclusive purchasing requirements for public procurement.

6.7.3 Balance Different Funding Options to Finance a Green Stimulus Policy

There are several financing options available for funding a larger green stimulus policy. South Africa's debt-to-GDP ratio is in line with other developing economies, and there is some space to take on more debt without risking a sovereign debt crisis. South Africa has significant foreign exchange reserves that can be used to cover more foreign debt.

While taking on domestic debt is not always desirable, debt used for green ends builds resilience and long-term sustainability, as opposed to incurring debt for purposes which reinforce 'brown' path dependencies. Judicious domestic borrowing, using mechanisms such as green bonds or climate bonds, or solidarity bonds as under COVID-19 conditions, could support the coffers for a green stimulus.

Fossil fuel subsidies should also be redirected to subsidise a green recovery. QE is another option for raising finance and tends to have a positive impact on government's debt portfolio, pushing bond yields down and improving the country's fiscal position.

Key Takeaways

1. COVID-19 has caused significant health impacts.

- South Africa emerged from its third wave of COVID-19 infections, with a total of over 1.9 million cases and more than 60 000 deaths (Worldometer, 2021; Department of Health, 2021). As of 28 June 2021, the recovery rate in South Africa was lower than the global average (91%) at approximately 89% (Worldometer, 2021; Department of Health, 2021).

2. The Pandemic is widening socio-economic fault lines across South Africa.

- Both the Pandemic and the national lockdown have exposed various socio-economic inequalities, such as access to food and healthcare. GDP declined significantly in 2020 and remained stagnant during 2021, leading to an increase in unemployment, poverty, and inequality.

3. COVID-19 economic recovery policies should drive sustainable and inclusive development.

- Green recovery policies can support an inclusive and sustainable economic transition and address South Africa's developmental and socio-economic challenges, while simultaneously decoupling economic growth from environmental degradation. Brown or business-as-usual recovery policies risk locking the economy into an unsustainable development trajectory.

4. South Africa's R500 billion Rescue Package might not be enough.

- The Rescue Package and the budget reallocation only represent a net increase in non-interest spending (or new government spending) for the financial year 2020/21 of R36 billion, or less than 1% of GDP. A stimulus policy needs to at least match the majority of the output gap, which is estimated to be 7.9% lower in the first three quarters of 2020, relative to the same period in 2019.

- The long-term consequences of implementing a stimulus policy that is too small, could potentially have greater impacts than implementing one that is too big.

5. South Africa's ERRP is an infrastructure-led recovery pathway.

- The ERRP will pursue an infrastructure-led economic reconstruction and recovery pathway, with aggressive investments in infrastructure as a means of stimulating various economic sectors.
- The ERRP acknowledges the co-benefits of a green economic transition in addressing South Africa's developmental challenges, while also driving economic competitiveness and supporting energy, food, and water security.

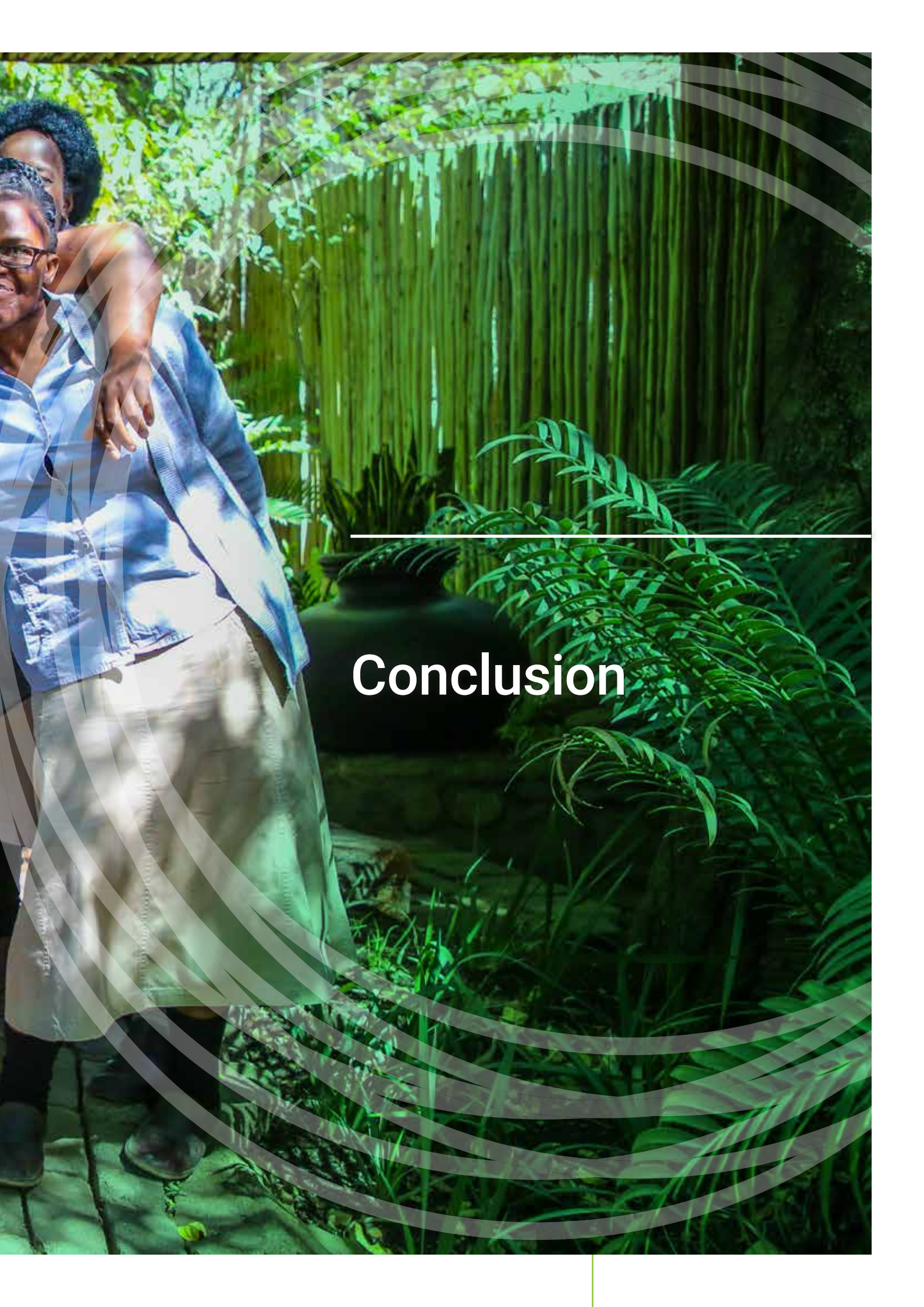
6. Modelling the ERRP suggests that the recovery effort can be more ambitious.

- A more ambitious green recovery relative to the policies set out in the ERRP are estimated to deliver approximately 5% more GDP growth, 0.5% less unemployment, and 23% lower greenhouse gas (GHG) emissions by 2030.
- Therefore, an ambitious green recovery from COVID-19 can address South Africa's developmental needs, while supporting a transition to an inclusive low-carbon green economy.

7. Finance a green recovery with a balanced approach.

- All potential funding sources for a green recovery in South Africa, such as foreign and domestic borrowing, COVID-19 solidarity and green bonds, wealth taxes, and quantitative easing, need to be explored and used collectively to balance their advantages and disadvantages. As with any well-balanced investment portfolio, the South African government could spread their funding risks across various mechanisms.





Conclusion

Summary

In summary, the following key enablers need to be addressed:

- Direct the economy toward a just and sustainable recovery, post-COVID-19.
- ‘Unlock’ innovative financing models to enable the transition.
- It’s critical to create an effective enabling environment.
- MSMEs are important role players in the transition to an inclusive low-carbon economy.

Direct the Economy Toward a Just and Sustainable Recovery, Post-COVID-19

Considering the significant risk of climate change and the impacts of COVID-19, and how the Pandemic has deepened the structural fault lines within the South African economy and society, a just transition to an inclusive green economy is critical. Our economic responses to COVID-19 will either set us on a more inclusive and sustainable development pathway, or lock us into a fossil fuel-driven development pathway. While the latter might present short-term growth opportunities, in the medium- to long-term, it risks increasing the frequency and intensity of future disasters related to climate change and environmental degradation. This will not only push more planetary systems beyond their planetary boundaries, but also erode the value of nature upon which economic development is dependent. It is therefore critical that the ERRP directs the economy toward a just and sustainable recovery, post-COVID-19.

This needs to be supported by addressing challenges associated with the enabling environment for a low-carbon, circular, and just transition in South Africa. Policies and measures across all spheres of government need to better align with low-carbon inclusive and circular imperatives to simultaneously address South Africa’s development and environmental needs. Policy implementation also needs to be strengthened through inclusive stakeholder engagements, supporting tools and guidelines, and a centralised M&E framework.

‘Unlock’ Innovative Financing Models to Enable the Transition

Funding the transition to a low-carbon inclusive economy will need to draw on both public and private sources of finance; redirect finances away from harmful investments, such as fossil fuel subsidies; and develop and implement new, innovative financing models. Understanding how to ‘unlock’ such significant funding is therefore central to the green transition. The enabling environment for sustainable finance in South Africa needs to be strengthened to support the effective implementation of sustainable fiscal policy and market mechanisms. This not only includes the development of sustainable finance instruments, such as green bonds, but awareness-raising, expertise, and project pipeline support to improve project bankability.

It’s Critical to Create an Effective Enabling Environment

Deepening emissions reductions across the economy and decoupling economic growth from environmental degradation will also require circular economy transitions across various sectors. Again, an effective enabling environment is critical to support the implementation of sustainable consumption and production practices, and behavioural change.

Sustainable public procurement has a particularly important role in this regard, in that it can drive demand for, and value of, secondary materials markets, which are critical for a circular economy. Multi-stakeholder collaboration within and across value chains is equally important, while effective M&E frameworks are also necessary, not just for policy implementation but for monitoring material availability and movement through a circular economy.



MSMEs are Important Role Players in a Just Transition

Small business support provides a unique opportunity to drive a just transition to a low-carbon and inclusive economy from the ground up. The role that small businesses play in the economy, in terms of supporting local economic development, innovation, social upliftment, and seizing on opportunities afforded by a green economy, make them critical bottom-up agents of change.

MSMEs are therefore, important role players in a just transition to a green economy, and need to be supported through an effective enabling environment and the ERRP.

Our Recovery Presents a Unique Opportunity to Catalyse the Just Transition

While South Africa has made significant progress towards transitioning to an inclusive and low-carbon economy, both in terms of the policies in place and action on the ground, it remains a carbon-intensive and unequal economy.

The COVID-19 Pandemic has presented a glimpse into the future impacts of climate disasters, and while its impacts have been devastating, the recovery presents a unique opportunity to catalyse the just transition to a low-carbon economy for the benefit of all South Africans.

A fossil fuel-driven development pathway risks increasing the frequency and intensity of future disasters related to climate change and environmental degradation.

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