



South Africa's 1st Annual Climate Change Report

A Synopsis of South Africa's 2015 Annual Report on Monitoring Climate Change Responses

Theme A



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

IMPRINT

Prepared by

Schulze, R. (University of KwaZulu-Natal)
Mantlana, K.B. (Department of Environmental Affairs)

Layout by

Twaai Design

Contact information

Department of Environmental Affairs
Environment House
473 Steve Biko Street
Arcadia
Pretoria 0001
South Africa

Tel: +27 12 399 9148
Email: bmantlana@environment.gov.za

The seven Themes of this Report are:

- ▷ **Theme A:** A Synopsis of South Africa's 2015 Annual Report on Monitoring Climate Change Responses
- ▷ **Theme B:** South Africa's Climate Change Monitoring and Evaluation System
- ▷ **Theme C:** Climate Change Trends, Risks, Impacts and Vulnerabilities
- ▷ **Theme D:** Tracking South Africa's Transition to a Lower Carbon Economy
- ▷ **Theme E:** Monitoring the Adaptation Landscape in South Africa:
Desired Adaptation Outcomes, Adaptation Projects and the Intended Nationally Determined Contribution
- ▷ **Theme F:** Climate Finance
- ▷ **Theme G:** Climate Change Adaptation Governance and Management
- ▷ **Theme H:** Near-Term Priority Climate Change Flagship Programmes
- ▷ **Theme I:** Key Outcomes of COP 21

Published in South Africa - August 2016



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FOREWORD BY MS. EDNA MOLEWA

MINISTER OF THE DEPARTMENT OF ENVIRONMENTAL AFFAIRS

Climate change is one of the greatest challenges of our time. As part of the global community, we know we shoulder an immense responsibility to deal with climate change and its impacts. The more we disrupt our climate, the more we risk severe, pervasive and irreversible impacts. That said - we do indeed have the means to limit climate change and build a more prosperous, sustainable future for our country and world, and all who live in it.


South Africa has endorsed the National Climate Change Response Policy as a vision and a framework for an effective climate change response, and the long-term, just transition to a climate-resilient economy and society. The policy is the product of an extensive consultation process. It sets two high-level objectives:

- **Firstly**, to effectively manage the inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity; and
- **Secondly**, to make a fair contribution to the global effort to stabilise greenhouse gas (GHG) concentrations within a timeframe that enables economic, social and environmental development to proceed in a sustainable manner.

South Africa's approach towards an effective climate change response is both developmental and transformational. It is developmental in that we are prioritising climate change responses that have significant mitigation or adaptation benefits, AND have significant economic growth, job creation, public health, risk management and poverty alleviation benefits. It is transformational in that we are seeking to address climate change at a scale of economy that supports the required innovation and finance flows needed for a transition to a lower carbon, efficient, job creating, equitable and competitive economy. In essence, it is about sustainable development.

Work is well advanced in implementing this National Climate Change Response Policy. One of the key elements of the climate change response is a country-wide monitoring and evaluation system that tracks South Africa's transition to a lower carbon and climate resilient economy and society.

The main output of the climate change monitoring and evaluation system is South Africa's annual climate change report. This year, the Department will publish its first annual climate change report. This report focusses on (i) quantifying and profiling the impact of ongoing or recently completed mitigation actions (ii) updating the information on climate finance that was reported in South Africa's



first Biennial Update Report (iii) providing latest available information on climate change risks together with describing ongoing adaptation projects (iv) presenting progress in establishing a credible tracking system for key climate change actions in the country (v) updating the roadmap on climate change flagship programmes (vi) recognising and profiling climate change actions that have been taken by the local government sphere of government and (vii) setting out key outcomes of the 21st Conference of Parties (COP 21) which took place in Paris in December 2015.

Internationally, South Africa submitted its own Intended Nationally Determined Contribution (INDC) to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat in September 2015. Our INDC encompasses three distinct components namely mitigation, adaptation and the means of implementation. The main aim of the next annual report (2016/17) is to initiate an in-depth annual process of reporting progress against South Africa's INDC.

Lastly, there is vast potential for co-operation in producing these annual reports. We recognise and thank all those that have assisted us to produce the first report. For this report, we received contributions from all three spheres of government, the private sector, civil society, foreign

embassies, and academia. In addition, I would like to thank the German government for the extensive support that we have received through GIZ. We invite many others to continue the collaboration with us as we contribute towards the identification of opportunities for further climate change actions and management of current and future climate risks with the view to consolidating the gains that this country has attained so far by improving peoples' livelihoods, conserving biodiversity, and improving human well-being. We believe that by working together; we can save our tomorrow today.

Thank you



MS. EDNA MOLEWA

Minister of the Department of Environmental Affairs

TABLE OF CONTENTS

I. BACKGROUND, OBJECTIVES AND APPROACHES ADOPTED	7
I.1 Background	7
I.2 Objective and Target Audience	7
I.3 Adopting the Approach of Working in Themes	7
I.4 Adopting the Approach of Working in Teams	7
2. THEME OVERVIEWS AND KEY MESSAGES	9
2.1 Theme B: South Africa's Climate Change Monitoring and Evaluation System	9
2.1.1 Theme Overview	9
2.1.2 Key Messages from the Climate Change Monitoring and Evaluation Theme	9
2.2 Theme C: Climate Change Trends, Risks, Impacts and Vulnerabilities	11
2.2.1 Theme Overview	11
2.2.2 Key Messages from the Climate Change Trends, Risks, Impacts and Vulnerabilities Theme	11
2.3 Theme D: Tracking South Africa's Transition to a Lower Carbon Economy	13
2.3.1 Theme Overview	13
2.3.2 Key Messages from the Theme on Tracking South Africa's Transition to a Lower Carbon Economy	13
2.4 Theme E: The Adaptation Landscape: Desired Adaptation Outcomes, Adaptation Projects and Intended Nationally Determined Contribution	14
2.4.1 Theme Overview	14
2.4.2 Key Messages from the Theme on the Adaptation Landscape and the Way Forward	15
2.5 Theme F: Climate Finance	16
2.5.1 Theme Overview	16
2.5.2 Key Messages from the Climate Finance Theme	16
2.6 Theme G: Climate Change Adaptation Governance and Management	17
2.6.1 Theme Overview	17
2.6.2 Conclusions and Key Messages on Climate Change Governance	18



2.7	Theme H: The Near-Term Priority Climate Change Flagship Programmes	19
2.7.1	Theme Overview	19
2.7.2	Key Messages from the Near-Term Priority Climate Change Flagship Programmes	19
2.8	Theme I: The Key Outcomes of COP 21	21
2.8.1	Theme Overview	21
2.8.2	Key Messages from the Near-Term Priority Climate Change Flagship Programmes	22
3.	LOOKING BACK AND LOOKING AHEAD	23
	REFERENCES	24

LIST OF ABBREVIATIONS

AFOLU	Agriculture, Forestry and Other Land Uses	NCCRP	National Climate Change Response Policy
ARC	Agricultural Research Council	NCCRWP	National Climate Change Response White Paper
COP	Conference of the Parties	NCPC	National Cleaner Production Centre
CSIR	Council for Scientific and Industrial Research	NDMC	National Disaster Management Centre
DAO	Desired Adaptation Outcomes	NDP	National Development Plan
DEA	Department of Environmental Affairs	NGO	non-governmental organisation
EEDSM	Energy Efficiency Demand Side Management	NPC	National Planning Commission
EEPBP	Energy Efficiency in Public Buildings Programme	SALGA	South African Local Government Association
EPWP	Extended Public Works Programme	SANEDI	South African National Energy Development Institute
ESKOM	Electricity Supply Commission	SAWS	South African Weather Service
GHG	greenhouse gas	SIP	Strategic Integrated Project
GHGIP	Greenhouse Gas Inventory Improvement Programme	UNFCCC	United Nations Framework Convention on Climate Change
ICLEI	International Council for Local Environmental Initiatives	WRC	Water Research Commission
IDC	Industrial Development Corporation		
IDM	Integrated Demand Management		
INDC	Intended Nationally Determined Contribution		
IPCC	Intergovernmental Panel on Climate Change		
M&E	monitoring and evaluation		
MRC	Medical Research Council		
MRV	measuring, reporting and verification		
NAMA	Nationally Appropriate Mitigation Action		
NCCRP	National Climate Change Response Policy		



I. BACKGROUND, OBJECTIVES AND APPROACHES ADOPTED

I.1 Background

South Africa's National Climate Change Response Policy (NCCRP) (DEA 2011) commits the Department of Environmental Affairs (DEA) in Section 12 to publish annual progress reports on monitoring climate change responses. These documents represent the primary output of the Climate Change Monitoring and Evaluation (M&E) framework and the 2015 Annual Report is the first of these progress reports. It focuses on providing a narrative of the information that the DEA's Climate Change Branch has collated over the past few years.

I.2 Objective and Target Audience

The objective of this Report is to communicate the progress and lessons learnt in tracking South Africa's transition towards a climate resilient society and a lower carbon economy. As a knowledge product, this Report aims to target people and institutions involved in technical, coordination and policy aspects of climate change, including those undertaking work relevant to these aspects of climate change.

I.3 Adopting the Approach of Working in Themes

The initial concept was that the Report would be a single large document, several hundred pages long with a range of chapters. As work progressed it was decided rather to present the Report in the form of Themes made up of this Synopsis (Theme A) plus six broad Themes (B to I), each made up of one or more of the original chapters on conceptual and technical elements (see below), with each Theme published as a separate booklet. Where relevant, an attempt is made to ensure that the information covers all three spheres of government, namely, national, provincial and local.

The seven Themes of this Report are:

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A number of topics originally envisioned as part of this Annual Report, by mutual agreement, have been kept over for the 2016 Report.

Taken in totality, this Annual Report is seen as part of the broader programme to communicate regular reporting of climate change relevant information to the South African audience.

I.4 Adopting the Approach of Working in Teams

The compilation of this Report is the work of many

individuals working in writing teams, and with inputs from a range of National, Provincial and Local government departments as well as from a host of other institutions, all of whom are acknowledged gratefully. Names of individuals and institutions appear on the front page of each Theme.

In total the conceptual and technical Themes were compiled by

- 18 lead authors
- 48 contributing authors and / or departments or embassies
- 3 lead reviewers

Contributions came from the Department of Environmental Affairs as the lead organisation, assisted by inputs from the:

- Department of Agriculture, Forestry and Fisheries
- Department of Cooperative Governance and Traditional Affairs
- Department of Energy
- Department of Health
- Department of Human Settlements
- Department of Public Enterprises
- Department of Rural Development and Land Reform
- Department of Science and Technology
- Department of Water and Sanitation
- National Treasury
- relevant provincial departments from the Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Mpumalanga, Northern Cape, North West and Western Cape
- Twenty-six Local Municipalities

- Eight Metropolitan Municipalities, namely Buffalo City, City of Cape Town, City of Johannesburg, City of Tshwane, Ekurhuleni, eThekweni, Mangaung and Nelson Mandela Bay
- embassies from ten countries, namely Australia, Denmark, France, Germany, Japan, Netherlands, Norway, Sweden, Switzerland, United Kingdom and United States of America

as well as from the:

- Agricultural Research Council (ARC)
- Council for Scientific and Industrial Research (CSIR)
- Electricity Supply Commission (ESKOM)
- Industrial Development Corporation (IDC)
- International Council for Local Environmental Initiatives (ICLEI)
- Medical Research Council (MRC)
- National Cleaner Production Centre (NCPC)
- National Disaster Management Centre (NDMC)
- North West University
- SASOL
- South African Cities' Network
- South African Local Government Association (SALGA)
- South African National Energy Development Institute (SANEDI)
- South African Weather Service (SAWS)
- University of Stellenbosch
- Transnet
- Water Research Commission (WRC)

2. THEME OVERVIEWS AND KEY MESSAGES

2.1 Theme B: South Africa's Climate Change Monitoring and Evaluation System



2.1.1 Theme Overview

Theme B is made up of four sections:

- **South Africa's Climate Change Monitoring and Evaluation System** which presents the objectives of the monitoring and evaluation (M&E) system, its benefits and an overview of the system, followed by
- **The National Climate Change Response M&E System: A Summary** which first tracks the transition to a lower carbon economy using a multi-tiered approach, second the transition to a climate resilient South Africa, and third tracks climate finance, leading to an overview of institutional arrangements, the legal and regulatory framework and the implementation plan for the M&E system. Then comes,
- **Agriculture, Forestry and Other Land Uses (AFOLU): Demystifying the Measurement, Reporting and Verification of this Specialised**

Sector with sub-sections on why the sector requires special treatment, its contribution to South Africa's greenhouse gas emissions, the value-add of tracking, reporting and verifying emissions and removals from the AFOLU sector, and milestones. The fourth section on

- **The Greenhouse Gas Inventory Improvement Programme (GHGIP)** outlines the rationale for developing the GHGIP, the National GHG Inventory System and GHGIP projects and their status.

2.1.2 Key Messages from the Climate Change Monitoring and Evaluation Theme

In summary form, the overall key messages from this Theme are:

- As required by the National Climate Change Response Policy (DEA 2011) and the National Development Plan 2030 (NPC 2011), South Africa has designed a National Climate Change M&E system composed of the National Greenhouse Gas Inventory system and the National Climate Change Response M&E system.
- The main objectives of this Climate Change M&E system are to track South Africa's transition to a climate resilient society, by tracking the country's transition to a lower carbon economy and by tracking climate finance.
- The benefits of the system include providing an evidence base for the impacts and the vulnerabilities brought about by climate change, providing learning for what has worked and what has not worked in climate change response, informing future responses to climate change, assessing the impact and need for climate finance as well as institutionalising the compilation of the national communications and the biennial update reports under the United Nations Framework Convention on Climate Change (UNFCCC).

- The climate change response M&E system will have an online portal and database as well as an annual publication on the status and impact of climate change and the country's response to it. The outcomes of this climate change M&E system will also be communicated through other national and international publications and platforms.
- The agriculture, forestry and other land use (AFOLU) sector has been identified as a specialised sector with unique characteristics that will receive special attention in the climate change response M&E system
- The measuring, reporting and verification (MRV) of AFOLU is being developed as a component of the climate change M&E system in such a way that it becomes a tool to gather and communicate data / information / knowledge to ascertain the impacts of land sector activities and the impacts of policy and strategic interventions in the sector, primarily on GHG emissions.
- The MRV of AFOLU will provide a knowledge base and measurement framework that will inform both the undertaking and improvement of relevant land sector mitigation activities, as well as helping to understand the impact of actions that enhance carbon sequestration and improved land management for multiple goals.
- While the National Greenhouse Gas Inventory system has been in operation for a number of years now with three GHG inventory publications to date, the Department of Environmental Affairs has initiated a programme to improve its performance in the form of a GHG Improvement Programme (GHGIP).
- The majority of the GHGIP projects have benefits that stretch beyond climate change objectives and have the potential to support other policy spaces. Good examples of such projects include the development of national land cover maps, which has received nation-wide attention, especially from remote sensing practitioners and policy makers.

These maps are being used for activities such as tracking land degradation and changes in land cover patterns associated with, inter alia, physical attributes (for example, the extent of mining and settlements).

- The GHGIP also supports other climate change response initiatives such as the carbon tax monitoring, reporting and verification process. Emission factors derived from GHGIP projects can now be used by entities reporting for tax liability as opposed to using default Intergovernmental Panel on Climate Change (IPCC) emission factors, which do not necessarily reflect national circumstances.
- The GHGIP has a well-defined objective, is pragmatic and results orientated. The combination of these GHGIP attributes attracts both funding institutions that are interested in similar work as well as industry and its associations. This approach ensures that trust is built between government and the private sector. This, in turn, benefits all parties involved in the process.
- As a way forward, the Department remains committed to the continuation of the GHGIP and invites relevant funding institutions and industry sectors to participate in the programme. This, in turn, will ensure that the GHGIP is sustained and can be scaled up to reach other sectors that are not yet covered.

2.2 Theme C: Climate Change Trends, Risks, Impacts and Vulnerabilities



2.2.1 Theme Overview

This Theme is comprised of two chapters, namely:

- **Observed Trends in the Climate of South Africa**, which analyses observed temperature and rainfall trends over the past few decades and drivers of variability of South Africa's climate. This is followed by a discourse on the different climate trends as they play out at provincial level, before assessing gaps and opportunities in this field and presenting ideas on coordinating climate change research and data dissemination in South Africa. The second chapter highlights
- **Climate Change Risks, Impacts and Vulnerabilities** in South Africa, emphasising climate change as a stress multiplier. It then reviews first observed and thereafter modelled future risks, impacts and vulnerabilities of long term change and extremes, focusing on hydrology and water resources, on biodiversity, agriculture and forestry, human settlements and on human health. The chapter concludes with an assessment of challenges, gaps and opportunities as well as policy implications.

2.2.2 Key Messages from the Climate Change Trends, Risks, Impacts and Vulnerabilities Theme

- South Africa's economy and its people face appreciable risks due to the potential impacts from ongoing climate change. These risks are likely to increase significantly if global warming exceeds the ambition stated in the UNFCCC's Paris Agreement of remaining below a limit of 1.5 to 2 °C above pre-industrial levels. This is because South Africa's climate is projected to warm between 1.5 and 2 times as fast as the global average, potentially resulting in drastic socio-economic and environmental effects.
- Model projections suggest significant warming and rainfall change for South Africa over the next several decades, even under strong international mitigation scenarios.
- Temperature trends consistent with anthropogenic warming continue to be seen across South Africa, with the strongest trends in the west and east, but less so in the central interior.
- There is no evidence to suggest a slowing of anthropogenic climate change trends in South Africa since 2000.
- While average rainfall trends are ambiguous, there is mounting evidence that South Africa is likely to experience longer dry spells, fewer rain days and more intense rainfall events.
- The impact of decadal variability on rainfall remains a significant concern, with the El Niño drought conditions of 2015/16 causing adverse impacts on South African socio-economic conditions through effects, at minimum, on the water and agriculture sectors. Under La Niña conditions during the decade of the 2000s, significant flooding events were common.
- The increasing severity of drought and flooding conditions suggest an interaction between, and an intensification of, rainfall extremes due to natural

variability and anthropogenic climate change.

- A stronger national focus on, and investment in, the observation network will be important for quantifying local to national patterns of climate change. There is an urgent need for more detailed information about atmospheric pressure profiles, temperature, rainfall, wind, humidity and evaporation.
- High altitude sites require a particular focus because of their influence on temperature and especially orographic rainfall, and hence runoff, which then cascades down to lower altitudes.
- In addition to weather data gathering and quality control, the hydro-climatic record since 2000 should be brought to the same level of quality and spatial resolution as the 1950–99 climate, and hence hydrology, datasets. They should be maintained at this level of excellence in order to inform government positions on climate change impacts, adaptation and mitigation on a continual basis.
- Sectoral risks due to “slow onset” climate change are reasonably well understood owing to the well-developed human and technological capacity by in-country practitioners to make projections of risk.
- Increasingly, adverse impacts with ongoing warming are indicated for water security, agricultural production and food security, human settlements, human health and well-being, as well as for certain natural ecosystems on land and in the ocean.
- Risks due to the impacts of extreme climatic events are being better recorded and monitored, but future projections of such risks remain less well developed and therefore high levels of uncertainty remain.
- The combined effects of these adverse sectoral effects on human livelihoods and the economy are less well understood than effects on individual sectors, but the capacity to make integrated assessments in-country is increasing. The integrated assessments show that the economy provides some capacity to adapt via pricing signals to encourage more efficient investment of financial and human resources, for example in increased agricultural production.
- Potential limits to adaptation resulting from resource constraints, for example in water supply, require urgent attention through the application of integrated assessment approaches.
- As a middle income country with a legacy of inequality that increases the vulnerability of the poor, adaptation to climate change represents an opportunity for South Africa to craft a more sustainable socio-economic development path.

2.3 Theme D: Tracking South Africa's Transition to a Lower Carbon Economy



2.3.1 Theme Overview

This Theme reviews the following:

- **National Level Indicators**, including sustainable carbon levels and comparisons with various trajectories, indicators of lower carbon consumption and productivity and lower carbon resourcing, followed by
- **Key National and Industrial Mitigation Response Measures**, looking at the mitigation impact of these measures and their impact on other sustainable development indicators, and
- **Low Carbon Development in Provinces and Cities**, assessing actions taken by provincial governments, metros and secondary cities, followed by a wide-ranging
- **Appendix on Response Measures** by individuals, groups and sectors in energy efficiency, electricity generation and transportation, as well as a review of Clean Development Mechanism projects and the Extended Public Works Programme.

2.3.2 Key Messages from the Theme on Tracking South Africa's Transition to a Lower Carbon Economy

While there is an overarching challenge of data availability and / or data quality in tracking South African's transition to a lower carbon economy, a number of key conclusions can clearly be drawn from this Theme:

- In 2010, South Africa's greenhouse gas emissions were within the national goal of the Peak, Plateau and Decline trajectory.
- The implied "carbon budget" between the country's 2010 emissions level of 518 MtCO₂e and the maximum emissions level of 614 MtCO₂e presented in the country's Intended Nationally Determined Contributions under the UNFCCC in 2025 is about 96 MtCO₂e.
- There are many programmes and projects with mitigation impacts that are being implemented in the country, with the bulk of these being energy efficiency programmes and projects.
- By 2014, a cumulative total of 611.5 MtCO₂e had been mitigated through a number of major national level and industry programmes, with about 76 MtCO₂e having been reduced in 2014 alone.
- At least 40 000 jobs created by 2014 can be termed green jobs, having been created by programmes that have significant climate change mitigation impact.
- More than 15 million tonnes of local air pollutants had been avoided by 2014 through implementing these key mitigation programmes.
- Provincial and local governments have been playing very important and significant roles in South Africa's transition to a lower carbon economy, particularly driving and / or supporting implementation of programmes on energy efficiency, renewable energy (supply), sustainable transport, efficient spatial planning, waste management and green procurement.

- The overall energy related GHG emissions from metropolitan cities decreased between 2004 and 2011, both in absolute terms and per unit of economic output. This was despite an increase in overall energy consumption in those cities showing that, overall, metropolitan cities are becoming more energy efficient.
- Availability of data remains the biggest barrier to effective tracking and assessment of South Africa's transition to a lower carbon economy. There is a dire need for key climate change response actors including government departments (national, provincial and local), industry and non-governmental organisations (NGOs) to collect, measure and monitor primary output data on climate related projects and programmes more effectively and systematically.

2.4 Theme E: The Adaptation Landscape: Desired Adaptation Outcomes, Adaptation Projects and Intended Nationally Determined Contribution



2.4.1 Theme Overview

Theme E consists of three interrelated chapters, the first being:

- **Desired Adaptation Outcomes (DAOs) for Monitoring and Evaluating Climate Resilience**, which sets out to inform and focus M&E of South Africa's progress towards a climate resilient society, with the Desired Adaptation Outcomes (DAOs) developed from sector specific adaptation priorities. Currently the sectors are biodiversity, water, health, human settlements and disaster management.
- **Climate Change Adaptation Projects**, the second chapter, outlines the approach taken and presents results achieved to date by climate change adaptation projects, while the third chapter,
- **Setting the Scene for Monitoring Progress Toward Achieving the Intended Nationally Determined Contribution (INDC) from South**



Africa, sets out the components and goals of the INDC for the period up to 2030. The goals include:

- developing a national adaptation plan
- considering climate in national and sub-national development
- building the necessary institutional capacity for climate change response planning and implementation
- having effective early warning systems in place
- developing a vulnerability assessment and adaptation needs framework
- communicating past investments in adaptation for education and awareness as well as for international recognition

2.4.2 Key Messages from the Theme on the Adaptation Landscape and the Way Forward

- The DAOs describe a desired dynamic state that will enable South Africa to be resilient to climate change. The DEA is in the process of finalising these desired outcomes with a view to monitoring the country's progress towards achieving them. During the 2016–17 financial year the work on DAOs will focus on three main activities, namely:
- Further consultations with other key stakeholders with a view to broadening the buy-in and acceptance of the DAOs.
- Identifying the information needed to understand each of the DAOs.
- Identifying the information sources and understanding the availability and accessibility of the information required to understand each of the DAOs.

Progress on these activities and subsequent steps will be reported in the next Climate Change Annual Report.

With regard to the overview of Climate Change Adaptation Projects, which includes M&E of projects addressing resilience to climate change, the key message from the projects listed indicates that adapting to climate change brings multiple benefits through:

- job creation
- skills development
- sustainable natural resources management
- emissions reductions
- food security
- information and knowledge management
- awareness raising
- economic development
- improved health care
- infrastructure design, education and livelihoods

Therefore, understanding the multiple benefits of adaptation responses should be an important component of the M&E process and these benefits could provide decision support tools for planning and scaling up. Subsequent annual reports will focus on assessing the effectiveness of projects in enhancing climate resilience and in assessing the respective contributions of the projects to DAOs and to the goals that have been identified in South Africa's Intended Nationally Determined Contribution.

2.5 Theme F: Climate Finance



2.5.1 Theme Overview

Climate finance may be defined as

...all resources that finance the cost of South Africa's transition to a lower carbon and climate resilient economy and society ... [covering] both climate specific and climate relevant financial resources, public and private, domestic and international. This includes financial resources that go towards reducing emissions and enhancing sinks of greenhouse gases; reducing vulnerability, maintaining and increasing the resilience of human and ecological systems to negative climate change impacts; climate resilient and low emission strategies, plans and policies; climate research and climate monitoring systems; as well as climate change capacity building and technology.

The Climate Finance Theme presents the sources, and in some cases destinations, of the finances that have been funding South Africa's transition to a climate resilient and lower carbon economy and society. While there are instances where it is possible to disaggregate the funding by whether it primarily contributes to a lower carbon economy (mitigation) or to climate resilience (adaptation), this is not always possible, especially for internationally sourced funds. The theme is structured according to the sources of finance, covering

- **Domestic Public Climate Finance** to support the transition towards a lower carbon economy, and national public funding mechanisms to support the transition to a climate resilient society and economy as well as outlining challenges, gaps and key success factors on funding climate resilience. The focus then shifts to
- **Bilateral and Multilateral Finance** addressing issues on international finance mechanisms related to climate resilience as well as on bilateral finance, followed by short sections on
- **Private Finance** and
- **Civil Society Finance.**

2.5.2 Key Messages from the Climate Finance Theme

- South Africa defines climate finance as all resources that finance the cost of the country's transition to a lower carbon and climate resilient economy and society.
- There are a number of financial tools that government has been using to fund the country's transition to a lower carbon and climate resilient economy and society. While most of them have an indirect impact on climate change adaptation and mitigation, there are a number of quantifiable grants that have a direct climate change mitigation impact.
- The main public climate finance grants that have a direct climate change impact include the Municipal Energy Efficiency and Demand Side Management (EEDSM) grants, the Expanded Public Works Programme (EPWP) grants, the Eskom Integrated Demand Management (IDM) grants, the Department of Environmental Affairs' Green Fund and funding for carbon capture and sequestration. Government has disbursed over R21 billion through these grants from 2009/10 to 2013/14.

- Public funding to support climate resilience has been largely through funding of observatories and research in universities and government research institutions.
- An estimated USD 2.1 billion has been received by South Africa in the period 2000–14 to support the country's transition to a lower carbon and climate resilient economy and society through both multilateral and bilateral funding mechanisms.
- Private sector and non-governmental organisations have also made significant financial contributions to South Africa's lower carbon and climate change transition, but quantifying the value of this contribution has not been possible for this report. Government plans to work with both of these types of stakeholders in the next years towards quantitatively estimating their contribution to the country's climate finance.

2.6 Theme G: Climate Change Adaptation Governance and Management



2.6.1 Theme Overview

The objective of this Theme is to provide an overview of progress made on climate change adaptation governance and management, one of the key elements of monitoring and evaluating climate resilience. The Theme commences with a chapter on the

- **Enabling Legislative Framework** which starts by outlining the overarching legislation with explicit reference to climate change adaptation, with the emphasis on the Disaster Management Amendment Bill of 2015. The following section deals with overarching legislative instruments with implied provision for climate change adaptation including the Spatial Planning and Land Use Management Act, 2013, (Act No.16 of 2013); the National Environmental Management Act, 1998 (Act No. 107 of 1998); the National Water Act, 1998 (Act No. 36 of 1998) and the National Housing Code Technical and General Guidelines (Part 3). The second component of the Theme deals with the
- **Enabling Environment for Climate Change Adaptation Governance and Management in Spheres of Government**, presenting first the

methodology used to collect information on the enabling environment, followed by the perspective of National Departments on incorporating adaptation strategies into policy and planning, and on mainstreaming adaptation into policies and plans. This is followed by sections on climate technology transfer, on provincial and then municipal / local municipal perspectives.

The activities covered by the scope of this work are collectively called the “enabling environment for climate change governance and management” and they will be used as the bases for understanding progress and effectiveness in implementing climate resilient measures. It is important to highlight that, in some instances, both adaptation and mitigation governance and management arrangements are undertaken jointly.

2.6.2 Conclusions and Key Messages on Climate Change Governance

In summary, the conclusions were that:

- A considerable amount of work has been undertaken in spheres of government to create an enabling environment for climate change governance and management.
- Most national sector departments prioritised in the NCCRP have developed climate change / adaptation plans and strategies; however, only a few sectors prioritised in the Policy have mainstreamed climate change into other policies and plans.
- There are other sectors which were not prioritised in the NCCRP which have developed climate change plans / strategies and which have mainstreamed climate change into other policies, plans and strategies.
- All provinces have developed climate change / adaptation strategies and plans.

- To date, only a few provinces have mainstreamed climate change / adaptation into other plans and strategies.
- The same is true for metropolitan municipalities.
- Only a few district and local municipalities have developed climate change strategies and plans, and mainstreaming these into other plans and strategies is also limited.

The following key messages emanate from the Governance Theme:

- The enabling environment to respond to climate change, across all spheres of government, would benefit from dedicated resources (human, financial and institutional) to respond to climate change. These resources appear to be critical in enhancing the integration / inclusion of issues prioritised in climate change / adaptation strategies and plans in strategic and development planning documents.
- There is also a need for better distribution of information and rigorous centralised analysis with regular updates. Such an approach will help to achieve sharing of lessons, failures and successes.

A structured analysis of successes, challenges and sharing of lessons learnt will also play an important role in upscaling success stories. The planned National Adaptation Strategy and the proposed Climate Change Act offer an opportunity to address the challenges identified in this work.

2.7 Theme H: The Near-term Priority Climate Change Flagship Programmes



2.7.1 Theme Overview

The Flagship Programmes contribute significantly to making South Africa's climate action development and implementation process predictable, continuous and optimised by establishing a pipeline of investment-grade climate change response programmes and projects. The programmes provide the necessary infrastructure to enable climate action at scale.

2.7.2 Key Messages from the Near-term Priority Climate Change Flagship Programmes

- South Africa already has a well-developed base for mitigating climate change and building climate resilience in the Near-term Priority Flagship Programmes which are strategic, large-scale measures of national significance. They are the game-changers in South Africa's climate change response landscape and represent the low-hanging fruits that can potentially catalyse South Africa's long-term climate action.
- These climate change Flagship Programmes include both the scaling-up of existing climate change

initiatives and new initiatives that are ready to come on stream by 2020.

- The eight Near-term Priority Flagship Programmes are currently made up of 39 distinct components that can be regarded as sub-programmes, each of which can be disaggregated further into distinct measures. Many components of the Flagship Programmes have been implemented with notable success and signify remarkably bold steps towards a low carbon and climate resilient economy and society.
- The NCCRP gives effect to the Flagship Programmes and recognises them as an integral part of South Africa's climate change response policy.
- Responding to the NCCRP's brief for Flagship Programmes going forward can be addressed by ensuring the following:
 - Clearly defined and identifiable governance structures operating at an appropriate level to enable coordinated programme implementation.
 - Establishing a common set of visible and easily understandable processes to put into operation each Flagship Programme as per the programme plan of action informed by the NCCRP.
 - An easily identifiable focal point and programme coordinator for each Flagship Programme, located at a sufficiently strategic level to have a holistic overview of each Flagship Programme and able to coordinate the different programme components
 - Self-identification, branding and communication of the respective programme's components, as belonging to a Near-term Priority Flagship Programme
 - The inclusion and communication of climate change as a key programme success metric.
- Flagship Programmes are funded primarily through public funds but are increasingly making use of

different funding mechanisms and leveraging private and international climate finance.

- There are opportunities to improve the extent to which public sector funding is used to leverage the finance and investment flows needed to scale up South Africa's climate change response.
- Flagship Programmes are positioned to be a central point for further investment in South Africa's climate response blending public and international climate finance. They provide the ideal opportunity to use the UNFCCC's Nationally Appropriate Mitigation Action (NAMA) Registry to attract funding and technical support for the full implementation of the NAMAs, as well as recognition and showcasing of NAMAs already implemented by South Africa.
- The mitigation Near-Term Priority Flagship Programmes embody the country's de facto portfolio of NAMAs. South Africa's NAMAs are thus nested and developed within the Near-term Priority Flagship Programmes. South Africa's approach to NAMAs is to focus on measures that have a sufficiently well-developed governance framework and well defined activities.
- The suite of measures identified as necessary to realising the National Development Plan 2030 (NDP) vision includes most of the programmatic elements of individual Near-Term Priority Flagship Programmes.
- There are particularly notable synergies between the Flagship Programmes and South Africa's Strategic Integrated Projects (SIPs).
- There is also a significant overlap between the INDC programmes identified for scaling up and resourcing, and the current set of climate change response Flagship Programmes.
- The Energy Efficiency in Public Buildings Programme (EEPBP) is an excellent example of how climate finance and other support mechanism can contribute

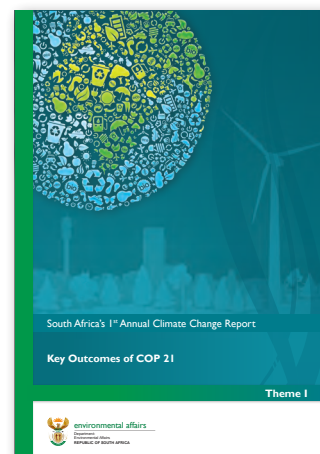
to the implementation of the NDP through a Flagship Programme.

- There are several critical improvement areas for Flagship Programmes going forward which can be addressed by ensuring the following:
 - Clearly defined and identifiable governance structures operating at an appropriate level to enable coordinated programme implementation.
 - Establishment of a common set of visible and easily understandable processes to put into operation each Flagship Programme as per the programme plan of action informed by the NCCRP.
 - An easily identifiable focal point and programme coordinator for each Flagship Programme, located at a sufficiently strategic level to have a holistic overview of each Flagship Programme and to be able to coordinate the different programme components.
 - Self-identification, branding and communication of the respective programmes' components, as belonging to a Near-term Priority Flagship Programme.
 - The inclusion and communication of climate change as a key programme success metric.
- All three spheres of government play important roles in addressing climate change and action must be coordinated:
 - National Departments are mandated to coordinate Flagship Programmes.
 - Provinces are expected to coordinate provincial adaptation and mitigation responses across their own line departments, as well as between municipalities within the province.
- The new priority areas of the Near-Term Priority Flagship Programmes recognise the importance of

both adaptation and mitigation as critical to South Africa's climate change response and therefore they include more adaptation priority areas.

- The Director-Generals of departments are invited to submit climate change flagship programmes to the DEA in line with the Flagship Priority Areas and the Flagship Criteria.
- The DEA has established a governance and coordination structure for Flagship Programmes comprising key role players.
- The DEA, together with stakeholders, has established a process for identifying, developing and operationalising Flagship Programmes.
- The DEA has established dedicated capacity for supporting the implementation and scaling up of Flagship Programmes.
- Taken together, the Near-term Priority Flagship Programmes are integrative at heart, seamlessly linking South Africa's national climate change response, development agenda and the global climate change policy framework.

2.8 Theme I: Key Outcomes of COP 21



2.8.1 Theme Overview

Marking the culmination of a four-year negotiating round that started at the 17th Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in Durban in 2011, the "Paris Outcome" of the 21st COP is made up of three main elements:

The Paris Agreement:

An enduring, legally binding treaty on climate action starting in 2020, the Paris Agreement will enter into force once 55 countries covering 55% of global emissions have acceded to it.

The COP Decision:

This is a set of decisions that the COP agreed to prepare for implementing the Paris Agreement once it enters into force.

The Paris Action Agenda:

These are additional commitments, which were taken at COP 21 parallel to the formal agreements, by countries, regions, cities, investors, and companies for additional climate action.

Key steps still remain, as many operational details of the new agreement were left to be decided by future COPs.

2.8.2 Key Messages from the Near-Term Priority Climate Change Flagship Programmes

- The Paris Agreement is a political landmark. It is a remarkable turning point for climate action, sending clear signals that a low-carbon and climate resilient world is inevitable.
- The Paris Agreement's three fundamental aims are to:
 - hold the increase in global average temperature to well below 2 °C above pre-industrial levels, and pursue efforts to limit it to 1.5 °C
 - increase the ability to adapt to climate change impacts, and foster climate resilience and low greenhouse-gas emissions development, without threatening food production
 - establish means of finance to achieve these goals
- The Agreement's long-term mitigation goal to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gas emissions in the second half of the century is buttressed by the Agreement's objective of "making finance flows consistent" with low-carbon and climate resilient development. As UN Secretary General Ban Ki-moon told the assembled delegates on 12th December: "What was once unthinkable is now unstoppable." The question is "at what pace?"
- The Agreement's transparency of action and support provisions will play an essential role in tracking countries' efforts toward the mitigation, adaptation and finance goals, building international trust and confidence that action is taking place and assessing how to facilitate further action and hopefully recalibrate the speed of action.
- The Paris Agreement gives adaptation prominence never seen before in climate history, acknowledging the vital importance of effective responses to climate impacts and the capacity of vulnerable communities to build resilience, and manage and adapt to climate change.
- The Paris Agreement also elevated the politically complex issue of loss and damage and established a dedicated framework, separate from adaptation, to address these issues, with particular attention to risk transfer and displacement.
- To periodically assess collective progress towards achieving the purpose and its long-term goals, the Paris Agreement establishes a "global stocktake" process. The first stocktake will take place in 2023.
- Substantial progress must be made this year on implementing the Paris Agreement. Leaders are scheduled to sign the Agreement in New York on April 22. The signing of the Agreement by political leaders gives a clear signal for the beginning of the process of ratifying the Agreement. In addition, in the months leading up to COP 22, in Marrakesh, Morocco in November 2016, and at the negotiations themselves, there is an opportunity for progress in unpacking the Paris Agreement to contribute towards effective implementation and enhancement of the INDCs.



3. LOOKING BACK AND LOOKING AHEAD

A vast amount of conceptual and technical effort has gone into this first Annual Report on Monitoring Climate Change Responses – effort initiated and led by the Department of Environmental Affairs and assisted by the many lead and contributing authors, as well as the wide range of institutions that have made significant inputs. The foresight of the GLZ in helping to fund this Report is greatly appreciated.

In some Themes the conclusions and key messages already point to new initiatives that have been identified, while in discussion it has come to the fore that future Annual Reports will be focusing on, for example, the Flagship Programmes, on assessing the effectiveness of projects in enhancing climate resilience and on assessing the respective contributions of projects to the Desired Adaptation Outcomes and to the goals identified in South Africa's Intended Nationally Determined Contribution. Future reports will also focus on issues of practical adaptation and on bringing readers up to speed with implications of the Paris Agreement for South Africa.


In closing, we reiterate what has already been stated in the Annual Report, namely:

South Africa's National Climate Change Response M&E system, and its associated Annual Climate Change Report, presents an opportunity for owners and implementers of climate related programmes to not only showcase their work, but also to learn from the lessons generated by others in the past.

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Environment House
473 Steve Biko
cnr Steve Biko and Soutpansberg Road
Arcadia
Pretoria, 0083
South Africa

Postal Address
Department of Environmental Affairs
P O Box 447
Pretoria
0001

Publishing date: August 2016

www.environment.gov.za