



Preparing for a Warmer Sub-Saharan Africa: Focus on Kenya and South Africa

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Executive Summary

In this working paper, we discuss the adaptation policy and legislative approaches in Kenya and South Africa with the aim of developing policy recommendations for replicable adaptation policies that can be used across Africa.

The paper highlights good practices within the European Union and under the auspices of the United Nations Framework Convention on Climate Change. We shall use these examples when developing the four main recommendations to be used by African countries specifically and developing economies generally.

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Introduction

The impact of the Climate Emergency on developing economies becomes more apparent with each passing day. Extreme events ranging from heatwaves to unexpected cold spells and the disappearance of small island states are testament to the reality of the climate emergency. The current Climate Emergency amplifies pre-existing systemic weaknesses and failures, as evidenced by the negative impact on food security resulting from perennial droughts, the impact on public health and the frequent disruptions to the global economy.

Since the 1990s, the global response to Climate Change has primarily focused on mitigation, specifically reducing greenhouse gas emissions, decarbonising economies and ultimately achieving a carbon net-zero world by 2050¹. This approach is prudent for large emitters, given the pressing need to reduce emissions and keep global warming below 1.5 Celsius to avert disaster². However, since COP 16 in November 2010, when the Cancún Adaptation Framework was adopted, there has been a growing emphasis on adaptation and supporting developing and least developed countries to build resilience³. To this end, there has been a renewed emphasis on developed countries supporting developing countries through capacity building, finance and technological development and transfer, as evidenced in the Glasgow Climate Pact⁴. Under the Paris Agreement and Glasgow Climate Pact, developed countries are further required to reduce GHG Emissions and decarbonise their economies while supporting other nations to achieve low carbon economies.

Why Adaptation

This publication asserts that developing countries' response to the Climate Emergency should be heavily focused on building adaptation and resilience for various reasons.

Low Carbon Emitters



Firstly, Africa and South America are comparably low carbon emitters; in 2020, the cumulative carbon dioxide emissions of Africa amounted to 3.7% of global emissions as such a focus on mitigation in these economies is not efficient⁵. Additionally, as of 2020, Africa had the lowest per capita emissions compared to the rest of the world hence mitigation efforts are comparatively easy to implement on the continent, but more work is needed to achieve proper adaptation and resilience-building goals⁶.

¹ United Nations Framework Convention on Climate Change, Paris Agreement 2015, Article 4 (1)

² United Nations Framework Convention on Climate Change, Paris Agreement 2015, Article 2

³ UN Climate Change Conference, 'Cancún Climate Change Conference - November 2010'
<https://unfccc.int/process-and-meetings/conferences/past-conferences/cancun-climate-change-conference-november-2010/cancun-climate-change-conference-november-2010-0>

⁴ United Nations Framework Convention on Climate Change, Glasgow Climate Pact 2021, Articles 7, 15 and 40

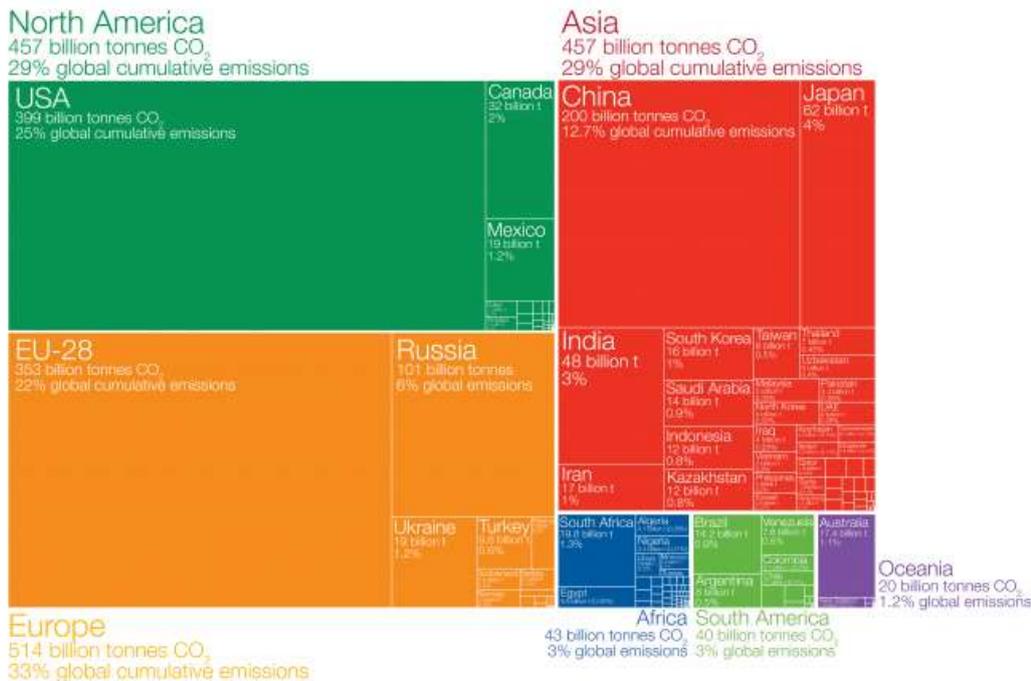
⁵ Hannah Ritchie, Max Roser and Pablo Rosado (2020) - "CO₂ and Greenhouse Gas Emissions". Published online at OurWorldInData.org. Retrieved from: <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>'

⁶ *ibid*

Who has contributed most to global CO₂ emissions?

Our World in Data

Cumulative carbon dioxide (CO₂) emissions over the period from 1751 to 2017. Figures are based on production-based emissions, which measure CO₂ produced domestically from fossil fuel combustion and cement, and do not correct for emissions embedded in trade (i.e. consumption-based). Emissions from international travel are not included.



Figures for the 28 countries in the European Union have been grouped as the 'EU-28' since international targets and negotiations are typically set as a collaborative target between EU countries. Values may not sum to 100% due to rounding.
 Data source: Calculated by Our World in Data based on data from the Global Carbon Project (GCP) and Carbon Dioxide Analysis Center (CDIAC).
 This is a visualization from Our World in Data, where you find data and research on how the world is changing. Licensed under CC-BY by the author Hannah Ritchie.

Destabilising Growing Economies (Case Study of Grenada)

Secondly, developing economies are easily destabilised by climate-related events and often take years to recover from the resultant shocks. For instance, Grenada was forced to default on sovereign debt due to the impact of the September 2004 Hurricane Ivan and the July 2005 hurricane Emily on the country's tourism sector and economy⁷. Hurricane Ivan resulted in damages amounting to approximately US\$900 million, with about two-thirds of this amount comprised of the housing stock, of which only 30 percent had some form of insurance⁸. The September 2004 hurricane also impacted the tourism sector with losses amounting to approximately 8% of GDP and wiped out the entire nutmeg crop. At the time, Grenada was making progress in addressing its debt issues; however, the financial loss associated with the extreme climatic event resulted in a debt restructuring of private-sector debt and the eventual intervention of the International Monetary Fund (IMF)⁹. The 2004 and 2005 hurricanes, coupled with the 2008 global financial crisis, further contributed to a deeper economic crisis between 2011 and 2012 and, thereafter, the 2013-2015 debt restructuring¹⁰. Developing economies tend to suffer more from climate change than developed nations due to various factors, including the lack of insurance uptake within the economy, reliance on natural resources for key productive sectors, including the agricultural and tourism industries and the lack of proper warning



⁷ Tamon Asonuma, Mike Xin Li, Michael G. Papaioannou, Saji Thomas, and Eriko Togo, 'Sovereign Debt Restructurings in Grenada: Causes, Processes, Outcomes, and Lessons Learned' IMF Working Paper WP/17/171 (International Monetary Fund, July 2017) 4

⁸ *ibid* 9

⁹ *ibid* 17

¹⁰ *ibid* 20-23

systems. Adaptation and resilience building will ensure the sustained growth of developing economies and contribute to global prosperity.

Human Rights Approach



Finally, climate change impacts the attainment of human rights and, according to the UN Special Rapporteur on Extreme Poverty and Human Rights, risks undoing the past 50 years of progress in development, global health and poverty reduction. To respond to the climate emergency, the global community must adapt and protect people living in poverty and work to mitigate the risks of hunger and the displacement of 140 million people in sub-Saharan Africa, South Asia and Latin America¹¹.

Based on these three reasons, this working paper analyses and discusses adaptation policies and techniques employed in developing economies and presents a few recommendations for other developing countries to employ when modelling their adaptation and resilience policies and legislation.

This working paper focuses specifically on the experiences of Kenya and South Africa in developing adaptation systems. Both Kenya and South Africa are developing economies and have experienced devastating climatic events. South Africa is one of the most advanced and industrialised countries on the continent and has a robust adaptation policy and strategy covering multiple sectors. On the other hand, Kenya is a fast-developing country and, as shall be described, is in the initial policy formulation process. Given the different levels of developing and implementing adaptation and resilience policies, both countries provide valuable lessons that can be tailored and used by other African countries. The paper shall first describe international adaptation and resilience best practices before delving into the South African and Kenyan case studies. In conclusion, we shall make policy recommendations for developing countries based on the international best practice and two case studies.

The analysis and recommendations are drawn from the African experience as the continent is naturally warm, and global warming results in a less habitable and productive continent as compared to more temperate and cooler regions; as such the continent's adaptive response will be slightly different from other parts of the world¹². The differentiated impact on the African continent is already evidenced by the perennial drought experienced in the horn of Africa, which results in greater food insecurity¹³.

To this end, Africa should focus most of its efforts on building resilience to guarantee sustained and sustainable development. It is important to note that the working paper does not focus on mitigation as adaptation tools and initiatives often have double benefits, including mitigation, ultimately encouraging sustainable growth and the decoupling of economic growth from the emission of greenhouse gasses.

¹¹ UN Human Rights Council, *Report of the Special Rapporteur on extreme poverty and human rights*, 17 July 2019, A/HRC/41/39, para 8, 9, & 10, available at: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G19/218/66/PDF/G1921866.pdf?OpenElement> [accessed 23 June 2022]

¹² 'Climate Change: 5 Ways It Will Affect You- Crop Changes,' (*National Geographic*) <https://www.nationalgeographic.com/climate-change/how-to-live-with-it/crops.html>

¹³ Pickson, R.B., Boateng, E., 'Climate change: a friend or foe to food security in Africa?' (2021) *Environment, Development and Sustainability* <https://link.springer.com/article/10.1007/s10668-021-01621-8#article-info>

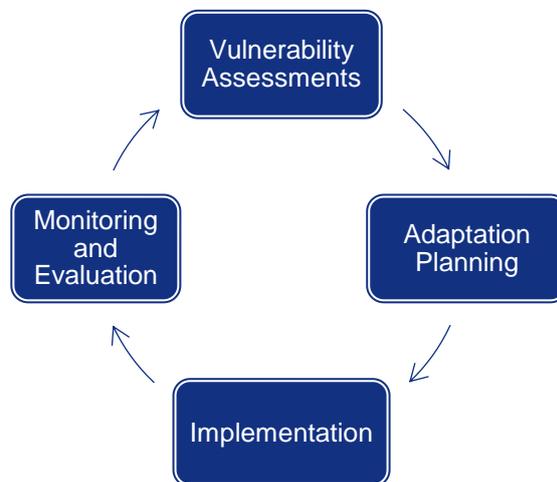
International Good Practice

What is Adaptation

Adaptation is the process of preparing for the ecological, social, economic and environmental changes resulting from climate change¹⁴. It refers to the processes, structures and procedures put in place to ensure that humanity can survive and thrive despite the current and expected threats posed by climate change.

In policy formulation, the basic adaptation planning and implementation process is a feedback loop, begins with assessment, and is concluded with monitoring and evaluation. The United Nations Framework Convention on Climate Change (UNFCCC) and the European Union have slightly differentiated approaches to adaptation policy formulation and implementation, as discussed below. These two institutions' approaches to adaptation offer a roadmap on how globally adaptation policies are implemented and are relevant in our comparison of the practice in Kenya and South Africa.

Basic Adaptation Process



UNFCCC Adaptation Processes



United Nations
 Framework Convention on
 Climate Change

Adaptation was first mentioned in the 1992 United Nations Framework Convention on Climate Change (UNFCCC), where parties were expected to make adaptation plans and communicate them to each other¹⁵. In 2010 at COP 16 in Cancún, Mexico, parties agreed for the

first time to prioritise adaptation alongside mitigation in the global climate change response¹⁶.

Currently, Parties to the UNFCCC work on adaptation through the following mechanisms:

2001 United National Climate Change Conference (COP 7) Marrakech, Morocco

- National adaptation programmes of action (NAPAs):** In 2001, at COP 7, Parties noted the differentiated needs of least developed countries (LDCs) and the need to deal with the adverse impacts of climate change. Parties adopted the LDC work programme, including

¹⁴ UNFCCC, 'What do adaptation to climate change and climate resilience mean?'

<https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/what-do-adaptation-to-climate-change-and-climate-resilience-mean>

¹⁵ United Nations Framework Convention on Climate Change, Paris Agreement 2015, Article 4 (1) b & e

¹⁶ UNFCCC, 'Cancún Agreements' <https://unfccc.int/process/conferences/pastconferences/cancun-climate-change-conference-november-2010/statements-and-resources/Agreements>

NAPAs, through which LDCs identify and work on priority adaptation activities in different contexts.

- The Least Developed Countries Expert Group (LEG): The LEG was established at COP 7 to provide technical support and advice to the least developed countries (LDCs) on the national adaptation programmes of action (NAPAs), the LDC work programme and the national adaptation plan (NAP) process.

2005 United National Climate Change Conference (COP 11) Montreal, Canada

- Nairobi work programme on impacts, vulnerability and adaptation to climate change: In 2005, at COP 11, the Nairobi Work Programme (NWP) was established to facilitate the development and dissemination of information to support the designing and implementation of adaptation policies and practices. The NWP allows for linking institutions, processes and expertise outside the auspices of the UNFCCC to respond to various adaptation knowledge needs.

2010 United National Climate Change Conference (COP 16) Cancún, Mexico

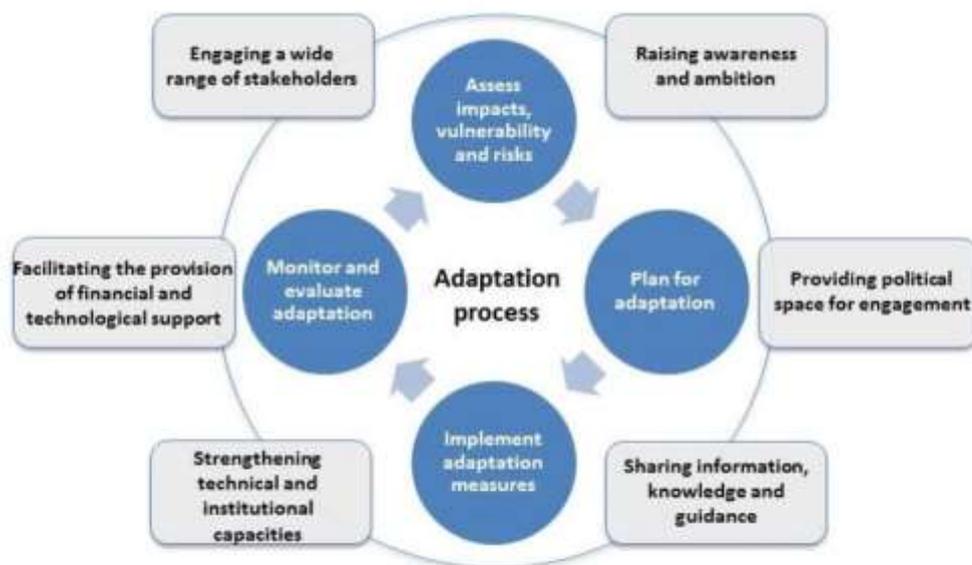
- National Adaptation Plans: In 2010, at COP 16, parties established the national adaptation plan (NAP) process, which allows countries to formulate and implement NAPs as a tool for identifying medium- and long-term adaptation needs and consequently fashioning relevant adaptation strategies and programmes.
- Adaptation Committee: During COP 16, the Adaptation Committee (AC) was established to promote the implementation of enhanced action on adaptation coherently under the UNFCCC.

2015 United National Climate Change Conference (COP 21) Paris, France

- Technical Examination Process on Adaptation: The technical examination process on adaptation (TEP-A) was established at COP 21 to run between 2016-2020 to identify concrete opportunities for strengthening resilience, reducing vulnerabilities, and increasing the understanding and implementation of adaptation actions. The topic for the 2020 TEP-A meetings (June- October 2020) was "Education and training, public participation and youth to enhance adaptation action"¹⁷.

¹⁷ UNFCCC, 'Technical Expert Meeting On Adaptation 2020: *Education And Training, Public Participation And Youth To Enhance Adaptation Action*' <http://tep-a.org/>

Below is a graphical depiction of the Adaptation cycle under the auspices of the UNFCCC.



The figure above shows graphically the adaptation cycle under the UN climate change regime, including four general components, which are individually featured under the SPOTLIGHT section (at the bottom of this page).

As demonstrated above, adaptation is a continuous process and to ensure proper policy and implementation; it is vital that all spheres of governance are consistently engaged, including politicians, scientists, technical experts and the citizenry.

European Union (EU) Adaptation Approach



The European Union has traditionally been a significant emitter of greenhouse gasses and, in the past, played a vital role in the implementation of the Kyoto Protocol and cut domestic emissions by 11.7% during Kyoto I (2008- 2012)¹⁸. During Kyoto II (2013-20), the EU cut emissions by 20% in line with their target¹⁹. Given the success of the partnership during the Kyoto era, the EU serves as an excellent example of how countries can collectively work on climate action. The EU adaptation approach aims to protect nature, people and livelihoods from the impacts of climate change.

A three-tiered approach is employed, with the first focus being on ensuring that EU policies build climate resilience; secondly, the EU members work to ensure that national and regional actors work towards adaptation and resilience in the different sectors. Finally, the EU supports global resilience initiatives by providing funding, knowledge and technological exchange and ensuring more robust engagement²⁰.

¹⁸ European Commission, 'Kyoto 1st Commitment Period (2008-12)' https://ec.europa.eu/clima/eu-action/climate-strategies-targets/progress-made-cutting-emissions/kyoto-1st-commitment-period-2008-12_en

¹⁹ European Commission, 'Kyoto 2nd commitment period (2013–20)' https://ec.europa.eu/clima/eu-action/climate-strategies-targets/progress-made-cutting-emissions/kyoto-2nd-commitment-period-2013-20_en

²⁰ European Commission, 'Adaptation to climate change' https://ec.europa.eu/clima/eu-action/adaptation-climate-change_en#:~:text=%20The%20EU%20works%20on%20three%20levels%20to,EU%20supports%20international%20climate%20resilience%20and...%20More%20

On 24 February 2021, the European Commission adopted the EU Adaptation Strategy as part of the European Green Deal. The strategy aims to achieve three main objectives, as illustrated²¹:



Smarter adaptation: Through improved knowledge and better access to data, the EU will limit the uncertainty around adaptation and enhance Climate-ADAPT as the European platform for adaptation knowledge.



Systemic adaptation: Systematic adaptation will be achieved by supporting policy development at all levels, including the cross-cutting priorities of Macro-fiscal policy, Nature-based solutions, and Local adaptation actions.



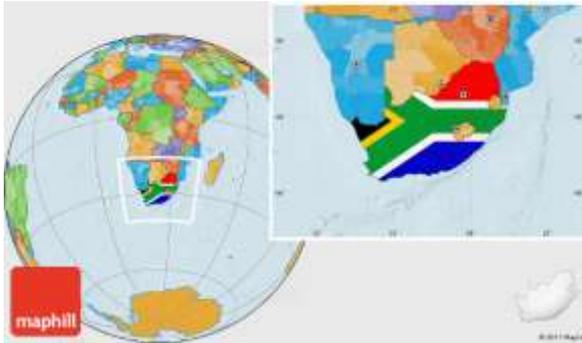
Faster adaptation: The EU will ensure faster implementation of adaptation initiatives both domestically and externally to respond to the growing climate emergency.

To ensure proper implementation, the EU is working to develop standard adaptation parameters, which shall be used to measure progress. The EU intends to develop a policy toolkit that can be contextualised and replicated across different countries and regions to ensure proper adaptation and resilience building. Currently, adaptation reporting requirements for EU countries are set out in regulations, including the Energy Union Governance Regulations²². The European Climate Law, once adopted, will set out clearer obligations for the EU with regard to adaptation.

²¹ Climate Adapt, 'EU Adaptation Strategy' <https://climate-adapt.eea.europa.eu/eu-adaptation-policy/strategy>

²² European Union, 'Questions and Answers: New EU strategy on adaptation to climate change' (24 February 2021) https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_664

South Africa



The Republic of South Africa is the southernmost country on the continent and the most industrialised African nation. It has one of the largest African economies, and its major productive sectors are agriculture, mining and finance²³. South Africa is the largest greenhouse gas emitter on the continent due to its advanced industrialisation and reliance on coal²⁴. The country has experienced multiple adverse impacts of climate change, as evidenced by the 2015-2020 drought that resulted in the Day Zero countdown in 2020, where all taps in the Eastern Cape would run dry²⁵.

South Africa's national approach to climate change is sectoral and includes regular vulnerability and risk assessments. The sectoral approach is evidenced in their INDCs, National Climate Change strategies and other policies and action plans.

²³ Brand of South Africa, 'SA's key economic sectors' <https://brandsouthafrica.com/economic-sectors-agricultural/#:~:text=Among%20the%20key%20sectors%20that%20keep%20South%20Africa%E2%80%99s%20an%20integral%20part%20of%20South%20Africa%E2%80%99s%20economy>.

²⁴ Hannah Ritchie, Max Roser and Pablo Rosado (2020) - "CO₂ and Greenhouse Gas Emissions: South Africa CO₂ Profile". Published online at OurWorldInData.org. Retrieved from: '<https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>' [Online Resource]

²⁵ Riaan Marais and Derek Van Dam, "Day Zero': This city is counting down the days until its water taps run dry' (CNN, 21 June 2022) <https://edition.cnn.com/2022/06/20/africa/south-africa-water-crisis-climate-weather-intl/index.html>

Overview of South Africa First Nationally Determined Contribution (NDC) (September 2021)²⁶

Element 1: National Circumstances, Institutional Arrangements and Legal Frameworks (13 Million USD for 2021-2030)

- Goal 1: Enhance climate change adaptation, governance and legal frameworks.
- Enhance the institutional arrangements in the Climate Change Bill for adaptation;
- Set up provincial and municipal forums on climate change by 2025;
- Implement provisions of the climate change bill by 2025.

Element 2: Impact, Risk and Vulnerability (8 Million USD for 2021-2030)

- Goal 2: Develop an understanding of the impacts on South Africa of global warming;
- Develop climate change planning tools and systems;
- Update National Long-term Adaptation Scenarios;
- Undertake Climate Change Needs and Response Assessments;
- Operationalise National Climate Change Risk & Vulnerability Assessment Framework;
- Roll out tools, including the National Climate Change Information Systems.

Element 3: National adaptation priorities, strategies, plans, goals and actions

- Goal 3: Implementation of NCCAS adaptation intervention for the period 2021- 20203 (3-4 Billion USD)
- Enhance water security and Develop an early warning system for small-scale farmers;
- Ensure monitoring, surveillance, and early warning systems for climate-induced diseases;
- Enhance the monitoring of Climate Change impacts on biodiversity and ecological infrastructure;
- Ensure urban planning and design incorporates climate change concerns.
- Ensure the development and deployment of climate-resilient infrastructure.

Element 4: Implementation and support needs of adaptation nationally (16- 267 Billion USD)

- Goal 4: access to funding for adaptation through multilateral funding mechanisms
- Development of climate change adaptation investment pipeline projects

Element 5: Implementation of adaptation action plans, including adaptation efforts of developing countries

- Goal 5: Quantification and acknowledgements of the national adaptation and resilience efforts
- National core sub-programs adaptation spent between 2015 and 2020 was 3.1 Billion USD
- Provincial core sub-programs adaptation spent between 2017 and 2020 was 2.9 Billion USD.

²⁶ UNFCCC, 'South Africa's First Nationally Determined Contribution (NDC)' (NCD Registry, September 2021) < <https://unfccc.int/sites/default/files/NDC/2022-06/South%20Africa%20updated%20first%20NDC%20September%202021.pdf> >

Policy and Legislative Framework

The country has developed policies to ensure that it integrates adaptation efforts within its national and sub-national decision-making. In the context of national planning, the government requires adaptation investment, capacity building and development of medium and long-term adaptation planning in its national development plan. Below is an overview of the national adaptation policies in place:

1. National Development Plan 2030 (updated September 2017)²⁷

This overarching development plan for South Africa aims to ensure economic, social and environmental development by 2030. It recognises the importance of adaptation and resilience planning and implementation to achieve sustainable development in the country. It includes requirements for investment, capacity building and development of medium and long-term adaptation planning.

2. National Climate Change Adaptation Strategy (NCCAS)²⁸

The NCCAS provides a shared vision of climate change adaptation and climate resilience. It aims to achieve four objectives.

- Build climate resilience and adaptive capacity to respond to climate change risk and vulnerability;
- Promote the integration of climate change adaptation response into development objectives, policy, planning and implementation;
- Improve understanding of climate change impacts and capacity to respond to these impacts;
- Ensure resources and systems are in place to enable the implementation of climate change responses.

3. National Climate Change and Health Adaptation Plan [2014-2019]²⁹

The Plan outlines selected health and environmental risks resulting from climate change, including heat stress, communicable and non-communicable diseases and mental health challenges, among others. The Plan proposes interventions to build resilience within the health system and interlinkages with other sectors.

²⁷ Republic of South Africa, National Development Plan 2030 Our Future-make it work (National Planning Commission, 15 August 2012) <https://www.gov.za/sites/default/files/gcis_document/201409/ndp-2030-our-future-make-it-workr.pdf>

²⁸ Republic of South Africa, National Climate Change Adaptation Strategy (Department of Environment, Forestry and Fisheries, November 2019) <https://www.environment.gov.za/sites/default/files/docs/nationalclimatechange_adaptationstrategy_ue10november2019.pdf>

²⁹ Republic of South Africa, National Climate Change and Health Adaptation Plan 2014-2019 (Department of Health,) <https://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2019/06/national_climate_change_and_health_adaptation_plan-a4_1_1-1.pdf>

4. Sectoral Cold Spell Management Plan [2015]³⁰

South Africa's Sectoral Cold Spell Management Plan outlines how to manage projected increases in the frequency of cold spells in the country's agricultural sector due to climate change. Its main objectives are to:

- Reduce negative impacts of cold spells through sustainable cold spell management tools and practices;
- Establish and implement priority programmes for cold spell management, preparedness, mitigation, response, recovery and risk management strategies;
- Implement and improve early warning systems as a disaster risk management tool.

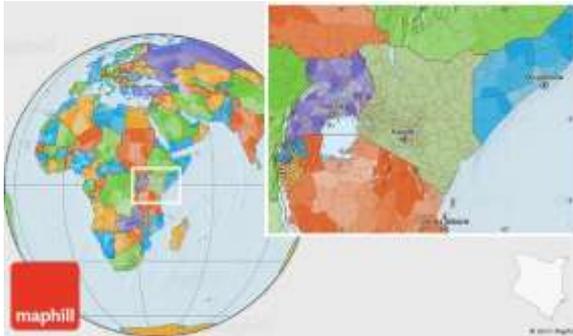
5. Disaster Management Amendment Act³¹

The 2015 Amendments integrate Climate Change planning into the Disaster Management process in disaster risk assessments and disaster management plans. The amendments provide measures to reduce the risk of disaster through adaptation to climate change and developing early warning mechanisms. It envisions that all national state organs will invest in disaster risk reduction and climate change adaptation, including ecosystem and community-based adaptation approaches.

³⁰ Republic of South Africa, Sectoral Cold Spell Management Plan (Department of Agriculture, Forestry and Fisheries, 29 May 2015) https://www.gov.za/sites/default/files/gcis_document/201506/38835gen495.pdf

³¹ Republic of South Africa, Act No. 16 of 2015: Disaster Management Amendment Act, 2015, (13 December 2015) https://www.gov.za/sites/default/files/gcis_document/201512/39520act16of2015disastermanamendact.pdf

Kenya



Kenya is the largest economy in East Africa and is one of the fastest-growing economies in Africa. Kenya has experienced the impacts of climate change evidenced by perennial droughts, floods in low-lying areas and more intense El-Nino and La-Nina events. Kenya has identified key sectors affected by climate change, though the country is still in the vulnerability and risk assessment stage of adaptation preparation.

Overview of Kenya's 2020 Nationally Determined Contributions ³²

<i>Disaster Risk Reduction:</i>	<ul style="list-style-type: none"> • This encompasses drought and flood risk management including early warning systems, preparedness and management.
<i>Agriculture (crops, livestock and fisheries):</i>	<ul style="list-style-type: none"> • Mainstream climate adaptation in the agricultural sector to increase productivity, build resilience and strengthen adaptation communication in the sector.
<i>Environment:</i>	<ul style="list-style-type: none"> • This includes goals on the forestry sector aimed at increasing tree coverage and greening infrastructure. There are additional goals on the coastal and marine management and conservation.
<i>Infrastructure (energy):</i>	<ul style="list-style-type: none"> • Following a vulnerability risk assessment develop guidelines on climate proofing energy infrastructure and increase participation in efficient energy use.
<i>Infrastructure (roads):</i>	<ul style="list-style-type: none"> • includes climate proofing and design innovation on at least 4500km of road.
<i>Water and Sanitation:</i>	<ul style="list-style-type: none"> • conduct climate risk assessments, build resilience on dams, dykes and rivers lines and promote water harvesting.
<i>Health:</i>	<ul style="list-style-type: none"> • conduct vulnerability assessments, develop climate change plans and policies and work to reduce the incidence of malaria and other vector borne diseases.
<i>Population, urbanisation and housing:</i>	<ul style="list-style-type: none"> • introduce flood control measures and green building codes in urban areas.
<i>Tourism:</i>	<ul style="list-style-type: none"> • develop guidelines and a climate resilience action plan.
<i>Gender, youth and other vulnerable groups:</i>	<ul style="list-style-type: none"> • Develop social structures, strengthen vulnerable groups access to climate finance and make climate technologies more accessible to different groups in society.
<i>Private Sector:</i>	<ul style="list-style-type: none"> • Mobilise financial resources for green investment and operationalise the Green Business Agenda. Promote eco-labelling and climate proof waste management infrastructure.
<i>Devolution:</i>	<ul style="list-style-type: none"> • Build climate vulnerability and risk assessments into County Planning processes and decision making.
<i>Adaptation M&E:</i>	<ul style="list-style-type: none"> • Refine and operationalise adaptation M&E systems.

³² UNFCCC, 'Kenya's Updated Nationally Determined Contribution (NDC)' (NCD (interim) Registry, 24 December 2020)
<[https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Kenya%20First/Kenya's%20First%20%20NDC%20\(updated%20version\).pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Kenya%20First/Kenya's%20First%20%20NDC%20(updated%20version).pdf)>

Policy and Legislative Framework

To ensure proper adaptation and resilience-building, the country has developed multiple policies. In the context of national planning, the country requires adaptation investment, capacity building and development of medium and long-term adaptation planning in its national development plan. Below is an overview of the national adaptation policies in place:

1. Kenya Vision 2030: Medium Term Plan III (2018-2022)³³

This is the country's national development plan; it highlights Climate Change as an emerging issue. It requires the country to make and implement regular Climate Change Action Plans. Vision 2030 recognises that Kenya is now a net greenhouse gas emitter and references the multiple droughts and floods experienced as a result of Climate Change in the Country.

The main approach to climate change is to build resilience, climate-proof infrastructure, develop capacity, and integrate climate change into national planning. Additionally, the Plan highlights the importance of a nationally coordinated response to be successful.

2. National Climate Change Action Plan II (2018-2022)³⁴

The action plan aims to create climate resilience while contributing to achieving Vision 2030. The Plan takes a sectoral approach toward resilience building. Below are the critical aspects of the Action Plan.

- *Climate vulnerability and risk assessments* are to be conducted at the national and county levels and in the private sector. Additionally, the Plan seeks to enhance the resilience of vulnerable populations and build resilience.
- *Response Coordination*: The Plan sets out a coordination structure based on the Climate Change Act 2016.
- *Sectoral Adaptation Actions*: The Plan provides for short-term (one to two year), Medium-term (three to five year), and long-term (over six year) interventions across various multiple sectors while leveraging on the opportunities presented by the devolved governance system.

3. National Policy on Climate Finance, 2016³⁵

The policy on climate finance was concluded in December 2016 and aims to ensure the coordinated identification and allocation of climate finance. It was developed to ensure the proper

³³ Republic of Kenya, Third Medium Term Plan 2018 – 2022: Transforming Lives: Advancing socio-economic development through the “Big Four” (The National Treasury and Planning, 2018) <http://vision2030.go.ke/wp-content/uploads/2019/01/THIRD-MEDIUM-TERM-PLAN-2018-2022.pdf>

³⁴ *ibid*

³⁵ Republic Of Kenya: The National Treasury, ‘National Policy On Climate Finance’ (December 2016) <http://extwprlegs1.fao.org/docs/pdf/ken190011.pdf>

implementation of the Climate Change Act 2016 and enable Kenya to meet its international climate obligations.

The policy aims to enhance the implementation of public finance management concerning climate finance, mobilise and monitor the usage of climate finance to ensure maximal impact and encourage private sector participation in climate-relevant finance financing

4. Climate Change Act, 2016

The Climate Change Act 2016 lays the legislative groundwork for the coordination of the national climate response. The Act established the National Climate Change Council, which coordinates national climate action and acts as a bridge between the executive as the President chairs it, and the legislature as it reports to Parliament³⁶. The Act requires the mainstreaming of climate planning across all levels of government and in all policy programs and processes³⁷. Before projects are undertaken, a Climate Risk Analysis is to be conducted and used to ensure the sustainability of the initiative³⁸. Below is a depiction of the national climate response coordination structure.

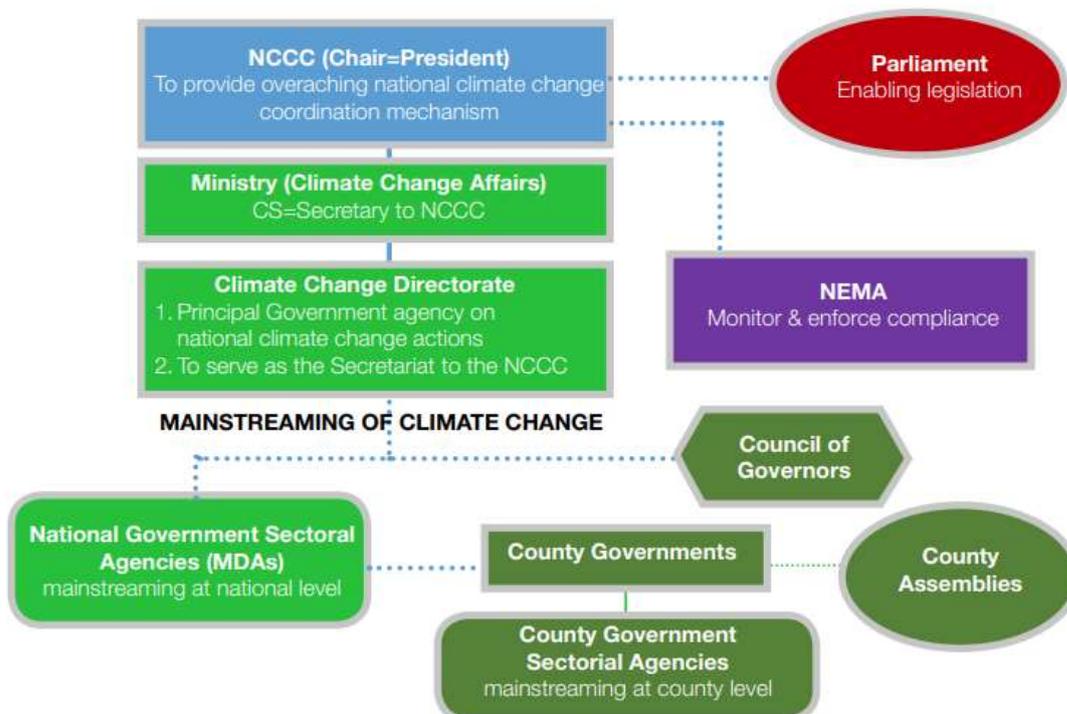


Figure 5: Climate change institutional coordination structures in the Climate Change Act (2016)

³⁶ Climate Change Act, 2016 (Kenya) Section 5 and 6

³⁷ *ibid* section 18 and 19

³⁸ *ibid* section 20

5. National Action Plan (2015- 2030)³⁹

The National Action Plan focuses on six key sectors and proposes measures that impact both adaptation and mitigation.



Disaster (Droughts and Floods) Risk Management:

Reduce risks to communities and infrastructure resulting from climate-related disasters such as droughts and floods.



Food and Nutrition:

Increase food and nutrition security through enhanced productivity and resilience of the agricultural sector in as low-carbon manner as possible.



Water and the Blue Economy:

Enhance resilience of the Blue Economy and water sector by ensuring access to and efficient use of water for agriculture, manufacturing, domestic, wildlife and other uses.



Forestry, Wildlife & Tourism:

Increase forest cover to 10% of total land area; rehabilitate degraded lands, including rangelands; increase resilience of the wildlife and tourism sector.



Health, Sanitation and Human Settlements:

Mainstream climate change adaptation into the health sector; and increase the resilience of human settlements, including improved solid waste management in urban areas.



Manufacturing:

Improve energy and resource efficiency in the manufacturing sector.



Energy and Transport:

Climate-proof energy and transport infrastructure; encourage electricity supply based on renewable energy; encourage the transition to clean cooking; and develop sustainable transport systems.

³⁹ Republic of Kenya, 'Kenya National Adaptation Plan 2015-2030 Enhanced climate resilience towards the attainment of Vision 2030 and beyond (Ministry of Environment & Natural Resources, July 2016) https://www4.unfccc.int/sites/NAPC/Documents%20NAP/Kenya_NAP_Final.pdf

Adaptation Approaches Based on the South African and Kenyan Case Studies

Both Kenya and South Africa have multiple similarities, given that they are fast-growing African economies. South Africa, however, has a more advanced economy and is geographically larger than Kenya hence the more elaborate adaptation planning.

Given these realities, the response in South Africa is more advanced and strategic, using planning tools and implementing multiple programs to build adaptive resilience.

In this section will discuss four approaches to adaptation, based on the South African and Kenyan approaches, comparing and contrasting them with the European Union and United National Framework Convention on Climate Change approaches and conclude with relevant recommendations.

1) Vulnerability and Risk Assessments



- Both countries require these assessments in various sectors. South Africa requires biannual assessments and currently conducts regular assessments in multiple sectors ranging from agriculture to health.
- Kenya, however, doesn't conduct regular assessments, although the Climate Change Act requires these assessments. The country is currently developing regulations and guidelines to facilitate the assessments.
- Under the UNFCCC approach, regular vulnerability and risk assessments are integral to the adaptation policy process as they ensure policymakers have access to the most recent and relevant scientific evidence.

Key Takeaway: Countries ought to use regular vulnerability and risk assessments as tools that allow the collection of evidence and give the public a chance to participate in response to climate change. These are vital in guiding annual planning and development across all sectors.

2) Adaptation response planning: An Integrated Approach



Element Based

South Africa's approach is based on five elements which include formulating and implementing adaptation policy and planning for climate finance between 2021 and 2030 across multiple sectors.

Versus

Sectoral Specific

The Kenyan approach is sector-specific which is important given that the country's economy relies on its agricultural sector and the relatively 'new' (since 2013) devolved system of government. However, sectoral thinking, on its own, can result in a lack of adaptation resilience across all levels of decision-making.

Key Takeaway: To attain sustainable development and effectively respond to climate change, an integrated approach to policy and decision-making must be employed across all levels of government, regardless of the sector. In the Kenyan case, the country should present proposals for each of the 11 outlined sectors. These proposals should be more than conducting vulnerability assessments as these are tools that must always be used- regardless of the implementation phase

a country is going through. Further, in line with the European Union approach, a systematic approach should be employed by both countries to ensure efficient adaptation and resilience building.

3) National Adaptation Planning



Both countries have National Climate Change Adaptation Plans, which are regularly reviewed and updated. These are vital in ensuring a coordinated approach to Climate Change Planning

South Africa has gone a step further and implemented a health policy and a Cold spell management policy focused on the sectoral impact of climate change.

Key Takeaway: It is vital that Kenya and other countries also adopt this approach to key sectors affected by climate change. Health is a vital sector that must be catered to especially given the real impacts of climate change on public healthcare. Perhaps a regional adaptation 'toolbox' as is proposed within the European Union will be helpful for developing countries to guide the national adaptation policy. All stakeholders working on climate change in the African context must work together to design and implement the toolbox.

4) Coordinated National Response Structures



Kenya has outlined its coordination structure in line with the Climate Change Act. Currently, the country is developing the capacities of the relevant institutions and is in the process of finalising regulations and guidelines to guide implementation.

South Africa currently coordinates its climate change work through various national and regional institutions. The country, however, is yet to adopt a Climate Change Act, which will enable coordination of all related work.

Key Takeaway: Countries must establish national coordination structures through legislation. The approach taken by Kenya and South Africa is to include this structure in a Climate Change Act. This may be the best way to go about it, depending on the contextual realities of the different countries. The importance of binding Climate legislation cannot be overstated, and all countries must strive first to develop relevant climate policy and enact binding legislation to ensure proper climate action.

Conclusion

To ensure adequate adaptation measures, countries must work towards building sustainable adaptation and resilience policies that cut across the whole economy. This working paper briefly discussed the approaches viewed as good practice in the European Union and under the United Nations Framework Convention on Climate Change (UNFCCC).

The European Union has a robust adaptation policy framework and is working towards enacting climate legislation to ensure member states are legally bound to implement agreed-upon climate responses. The European Union has an excellent track record in meeting its commitments under the Kyoto Protocol, and it is expected that similar progress shall be made regarding adaptation and resilience-building policy formulation and implementation.

The paper explores the approaches in Kenya and South Africa, starting from the Nationally Determined Contributions under the UNFCCC, further explores the various policies in place and finally, legally binding legislation. South Africa has adopted a more systematic approach, given its track record in implementing climate policies. On the other hand, Kenya has a more sectoral approach which ensures that adaptation initiatives cover the most vulnerable sectors.

The working paper presents four main recommendations for both countries based on the different structures of their adaptation policy frameworks. The recommendations relate to the following major themes:

- i. Vulnerability and Risk Assessments;
- ii. Adaptation response planning: An Integrated Approach;
- iii. National Adaptation Planning;
- iv. Coordinated National Response Structures.

This working paper aims to stimulate discussion on the adaptation policy formulation approaches that African countries should work towards to ensure a sustainable response to the climate emergency.



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