



PRESIDENTIAL
CLIMATE COMMISSION
TOWARDS A JUST TRANSITION



.....

DRAFT RECOMMENDATIONS FOR SOUTH AFRICA'S 2030- 2035 NDC UPDATE

**PCC Recommendations for Public
Comment & Discussion**

4 June 2025

ABOUT THE PRESIDENTIAL CLIMATE COMMISSION

The Presidential Climate Commission (PCC) is an independent multi-stakeholder body established by the President of the Republic of South Africa. The PCC's mandate emanates from the Presidential Jobs Summit held in 2018, and the PCC is committed to ensuring that the transition is socially just and that the needs of vulnerable groups are addressed. The Climate Change Act sets out the functions of the PCC, which include providing advice on the Republic's climate change response and pathways to a low-carbon climate-resilient economy and society. In building this society, South Africa needs to ensure decent work for all, social inclusion, and the eradication of poverty. Those most vulnerable to climate change, including women, children, persons with disabilities, the poor and the unemployed need to be protected, and workers' jobs and livelihoods also need protection. The PCC facilitates dialogue between social partners on these issues and, in particular, defining the type of society we want to achieve and detailed pathways for how to get there.

ABOUT THIS REPORT

This report presents the PCC's recommendations for South Africa's 2030-2035 Nationally Determined Contributions (NDC) update. The recommendations are based on analysis of existing research and evidence, and stakeholder engagement with all social partners. They are set against the current national policy framework, notably the Climate Change Act, the National Development Plan, the Just Transition Framework, and South Africa's current climate commitments (2021 NDC update).

This recommendations report forms part of a series of three reports, that will all become available on the PCC website, and should be read together:

- The 2030-2035 NDC Update Recommendations Report (This report), which describes the recommendations of the PCC to Government based on our research and engagement with stakeholders.
- The Stakeholder Perspectives Report, which presents the unfiltered perspectives of the stakeholders consulted in preparing the PCC recommendations on the 2030-2035 NDC update.
- The Technical Report, which holds the summary of the PCC's technical research work that informed the consultations and recommendations report.

Collectively, these reports aim to inform South Africa's strategic positioning on **adaptation, mitigation, and means of implementation** for the 2030–2035 period, providing an evidence-based and consultative foundation for advancing an equitable and climate-resilient transition in alignment with the objectives of a just transition.

Executive Summary

This report from the Presidential Climate Commission (PCC) presents recommendations to guide the Department of Forestry, Fisheries and the Environment (DFFE) as it updates South Africa's Nationally Determined Contribution (NDC) for the 2030–2035 period. Grounded in the principles of procedural, distributive, and restorative justice, these recommendations aim to align South Africa's international commitments with domestic development priorities, legal obligations under the Climate Change Act, and pressing socio-economic imperatives. **Setting an NDC requires dedicated resources, inclusive and whole of society engagement and consultation, better integration across government departments, and alignment with Sectoral Emissions Targets (SETs). The Low Emissions Development Strategy (LEDS) and the SETs are vital for shaping South Africa's future economy and should be treated as national priorities, with future processes open to public engagement**

The updated NDC should reflect South Africa's evolving climate governance landscape, it must take into account the pace and affordability of the transition considering energy security and sustainable economic growth. The PCC accepts that you can transition too fast, but you can also transition too slowly, both cases having significant but different economic and social impacts. However, managed correctly the NDC does present an opportunity to decarbonise existing sectors, gradually phase out sectors that will cease to be more competitive and also introduce sectors that will create opportunities for employment. **The Climate Change Act and the Just Transition Framework provide the legal and policy foundation for ensuring that the shift to a low-carbon economy is fair, inclusive, and supportive of vulnerable communities and workers.**

The PCCs recommendations are framed considering South Africa's socio-economic conditions and the context of the Paris Agreement and the outcomes of the UAE Consensus at COP28, which together establish a global mandate to accelerate climate ambition through rapid emissions reductions, strengthened adaptation, and the just phase-down of fossil fuels. Given the escalating climate risks, trade and finance pressures, and domestic inequalities, the 2030–2035 NDC update should reflect South Africa's just economic transformation. It must balance local realities with global expectations, clearly outline policy intentions, and assign responsibilities across all spheres of government. The updated NDC will signal our strategic intent to the world, grounded in the principles of South Africa's cabinet approved Just Transition Framework.

South Africa is already facing intensifying climate risks such as extreme heat, prolonged drought, and destructive flooding. The next **iteration of South Africa's NDC must substantially increase both ambition and implementation readiness to respond to escalating climate risks and meet the evolving expectations under the Paris Agreement's GGA**.¹ South Africa's updated NDC should embed a strengthened adaptation response built on the Anticipate–Adapt–Recover framework. **It must include time-bound, system-specific targets for key sectors such as water security and drought resilience; climate-resilient infrastructure and human settlements; climate-smart agriculture and food systems; climate-responsive public health systems; and mainstreaming adaptation in governance planning**, aligned with the National Climate Change Adaptation Strategy and the forthcoming National Adaptation Strategy and Plan.

Making a decision about an NDC is ultimately a political one. However, the Climate Change Act introduces a shift: the legally binding greenhouse gas (GHG) emissions trajectory will be gazetted by the Minister,

¹ Republic of South Africa. 2024. *South Africa's First Biennial Transparency Report (BTR1)*. Department of Forestry, Fisheries and the Environment. Available here: <https://unfccc.int/documents/645057>

with the NDC serving as a transparent communication instrument for domestic and international stakeholders. The existing body of research and evidence shows that a climate compatible transition is both possible and desirable, but not everything can be modelled. We must pave the way for a just transition towards low-carbon and climate-resilient societies. **The existing body of work by ESRG suggests that a national carbon budget range of 8GtCO₂e - 9GtCO₂e is a no regret option considering our fair-share contribution and economic benefits. We must continue to express our NDC as a range, the ESRG modelled pathways suggests a 2035 emissions range of between 248 MtCO₂e and 329 MtCO₂e, depending on the pathways considered.** While it is recognised that this range is obtained from a single study, it is aligned with findings from other work that explores emissions levels that represent South Africa's 2035 fair share contribution to the global mitigation effort. This represents a no-regret choice informed by updated national modelling, consistent with a well-below 2°C pathway and remaining mindful of national capacity and economic recovery needs.

This will require Investment in renewable energy infrastructure, grid upgrades, and storage to ensure energy security and our developmental needs. The direct investment in electricity infrastructure will create jobs and contribute towards GDP growth. Moreover, green industrialisation and economic diversification should be prioritised through the development of green technology value chains. There are several upsides to a green industrial economy, including GDP growth, employment and the opportunity to tackle inequality.

The means of implementation must be strengthened through the **integration of climate finance into South Africa's Medium-Term Expenditure Framework, mobilisation of international concessional finance, and operationalisation of domestic instruments such as the Just Transition Financing Mechanism and the Climate Change Response Fund.** Strengthened delivery will also require urgent institutional support, particularly at the municipal level. This includes the strategic use of the Climate Capacity Diagnosis and Development tool, **embedded technical assistance, support for project preparation and investment pipeline development**, and alignment of sectoral masterplans with climate priorities.

To ensure a credible transition, the PCC urges the realisation of the planning instruments for a just transition: labour market reform and skilling/re-skilling mechanisms, industrialisation and economic diversification (especially in highly affected transition regions such as Mpumalanga), social support for displaced worker, enabling governance and regulatory roles for all spheres of government, and facilitating an environment that enables the flow of climate finance.

Table of Contents

ABOUT THIS REPORT	2
Executive Summary	3
1. Introduction	10
1.1. Background	Error! Bookmark not defined.
1.2. Setting the Scene	10
1.3. South Africa's approach to climate change	12
1.4. Purpose and Origins of an NDC	13
2. Stakeholder Views.....	15
4. Adaptation	17
4.1. The Urgency of Adaptation.....	17
4.2. Adaptation Progress Since the 2021 NDC.....	18
4.3. Priority Systems for Resilience.....	20
4.4. Transformative and Justice-based Adaptation	22
4.5. Policy and Regulatory Strengthening.....	23
4.6. Elevating Adaptation Ambition, Governance and Institutional Capacity	24
4.7. Scaling and Integration of Adaptation Finance.....	26
4.8. National Loss-and-Damage Response Framework.....	26
5. Mitigation	27
5.1. Reflections on the 2030 target range	29
5.2. Proposal for the 2035 emissions range	30
5.3. Recommendations for inclusion of sectoral considerations	32
6. Means of Implementation	35
6.1. South Africa's NDC implementation must enhance justice and economic diversification.....	35
6.2. Adaptation needs to be an implementation priority	36
6.3. Climate finance flows and support need to be increased	36
6.4. South Africa's climate finance environment should be broad, flexible, innovative, strategic and principles-based.....	37
6.5. Climate finance absorptive capacity must be strengthened.....	38
6.6. Local government needs to be empowered and supported.....	39

6.7. Monitoring, evaluation and accountability must be improved.....	39
8. Summary.....	40
8.1. An Inclusive and Policy-aligned NDC Process	40
8.2. Systemic Reform to Enhance Resilience and Adaptation.....	40
8.3. Mitigation ambition and enabling considerations	40
8.4. Means of Implementation	41



Table of Figures

Figure 1: South Africa's historical emissions and 2021 NDC targets	14
Figure 2: Data points used in developing the PCC emissions range proposals	31



List of Acronyms

CBAM	Carbon Border Adjustment Mechanism
CCRF	Climate Change Response Fund
CGE	Computable General Equilibrium
CO ₂	Carbon dioxide
CO ₂	Carbon dioxide equivalent
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CSIR	Council for Scientific and Industrial Research
DFFE	Department of Forestry, Fisheries and Environment
ESRG	Energy Systems Research Group
ETF	Enhanced Transparency Framework
GDP	Gross Domestic Product
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
JTFM	Just Transition Financing Mechanism
LEDS	Low Emissions Development Strategy
M&E	Monitoring and Evaluation
NCCAS	National Climate Change Adaptation Strategy
NDC	National Determined Contributions
NDP	National Development Plan
OEM	Original Equipment Manufacturer
PCC	Presidential Climate Commission
PFMA	Public Finance Management Act
RCP	Representation Concentration Pathway

SATIMGE
(SATIM+SAGE) South African Times Model, South Africa General Equilibrium Model

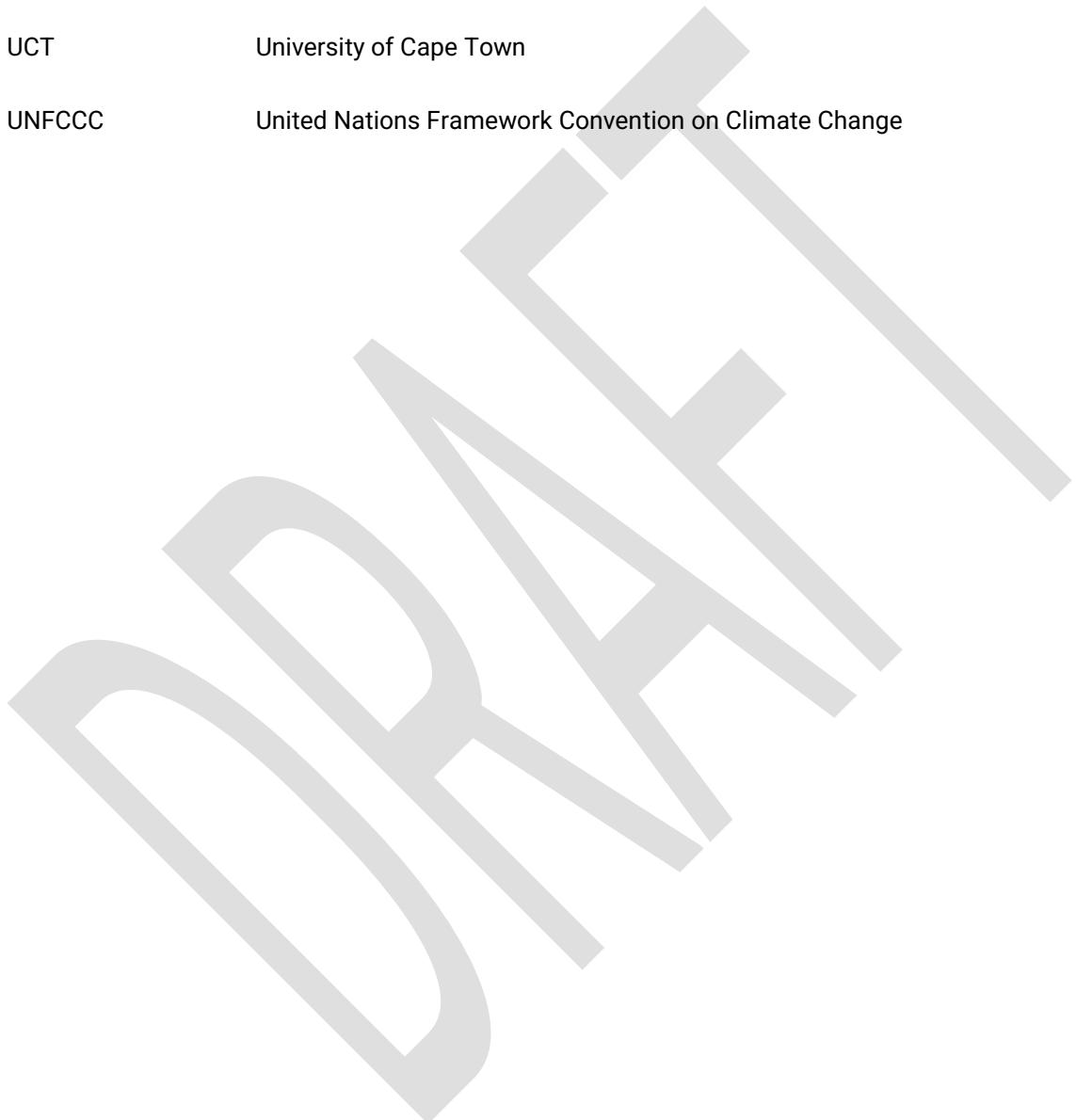
SETs Sectoral Emissions Targets

SSP Shared Socioeconomic Pathway

UAE United Arab Emirates

UCT University of Cape Town

UNFCCC United Nations Framework Convention on Climate Change



1. Introduction

As a signatory of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC), South Africa is required to submit a Nationally Determined Contribution (NDC) targets every five years. The country submitted its first NDCs in 2016 and the updated NDCs in 2021. The updated NDCs committed the country to a fixed target range for greenhouse gas emissions levels of 398-510 MtCO₂e by 2025, and 350-420 MtCO₂e by 2030. The Presidential Climate Commission (PCC) played an influential role in the update of the NDC range for 2025 and 2030 that were approved by cabinet, by making recommendations into the Department of Forestry, Fisheries and the Environment (DFFE) NDC update process. This was done by commissioning additional research, collating the research of others and convening a series of dialogues to seek alignment and forge consensus amongst stakeholders. The 2021 South African NDC has been crucial in driving domestic climate action. It is critical that the updated NDC, due for discussion at COP30 in Belem, provides a target range that would continue to drive domestic climate efforts that consider climate adaptation and mitigation efforts and their means of implementation. Moreover, the NDCs play a pivotal role in shaping the trajectory of South Africa's economy, serving as both a blueprint for sustainable development and a powerful economic signal.

The country's compilation of the 2030 - 2035 NDC is led by the DFFE, and the Minister of Forestry, Fisheries and Environment will table the NDC on behalf of South Africa with the United Nations. The PCC is once again preparing recommendations to the Minister of Fisheries, Forestry and Environment for consideration. The aim is to support a credible NDC that South Africa can submit ahead of the UNFCCC's COP30.

1.1. Setting the Scene

The Just Transition is central to South Africa's NDC. Key planning instruments- such as economic diversification, labour market readiness, social support, governance, and climate finance- must drive the transition in ways that actively reduce structural inequalities linked to race, gender, geography and economic access. This means not only decarbonising high-emitting sectors but also introducing new sectors and deploying infrastructure that will open opportunities for employment, innovation, and inclusion. The NDC should not only alter the industries and technologies that drive the economy but also change who benefits from that economic activity, aiming for more inclusive and equitable outcomes. It presents an opportunity for us to reconfigure our economy, address South Africa's unjust and unsustainable current economic structure, which continues to marginalise many, it is as much a social and political transformation as it is a technological or environmental one.

As articulated in the cabinet approved Just Transition Framework, the PCC advocates for a transition that is timely, well-managed, and just. The PCC accepts that you can transition too fast, but you can also transition too slowly, both cases having significant but different economic and social impacts. However, managed correctly the NDC can be used to re-design our economy and to ensure that the transition presents an opportunity to decarbonise existing sectors, gradually phase out sectors that will cease to be more competitive and also introduce sectors that will create sustainable opportunities for employment. The Climate Change Act and the Just Transition Framework provide the legal and policy foundation for ensuring that the shift to a low-carbon economy is fair, inclusive, and supportive of vulnerable communities and workers.

"We will continue our just transition to a low carbon economy at a pace our country can afford and in a manner that ensures energy security."

SONA 2025, President Cyril Ramaphosa

The climate challenge cannot be ignored, we must recognise that many of the risks we face, including trade restrictions, loss of market access, capital flight, and intensifying climate impacts, are largely exogenous as they are imposed by the behaviour and policies of our trade partners as they seek to meet their local climate commitments. This places us in a unique diplomatic position, the 2030–2035 NDC can be used as a key foreign policy signal that will shape South Africa's standing in trade negotiations and ability to access preferential finance, and partnerships with progressive climate actors. Our decisions that lead to the updated NDC will signal whether South Africa intends to join the ranks of countries acting with urgency and integrity in the face of climate breakdown to reduce physical climate risks.

This transition goes far beyond the deployment of technologies—it requires rethinking how the economy is structured and ensuring that its benefits are more equitably distributed across society. We need to reimagine what a prosperous future for all South Africans looks like (NDP2030). This requires more than technical planning as it demands a shared vision of a prosperous, low-emissions, climate-resilient future for all. A future where justice is not something we wait to be given, but something we deliberately design and deliver ourselves. The NDC update is critical to our transition, it deals with adaptation and resilience, common but differentiated responsibilities and respective capabilities (CBDR&RC), and means of implementation embedded throughout with deliberation on local and international justice.

The drafting of the 2030–2035 NDC is a critical opportunity to reflect South Africa's full spectrum of climate priorities — encompassing mitigation, adaptation, and implementation support — in a manner aligned with national development goals and international climate commitments. This includes progressive mitigation priorities, building resilience to worsening climate risks, especially for vulnerable communities and ecosystems, and identifying the financial and technical resources required to implement our climate response effectively. South Africa's Climate Change Act and Just Transition Framework, both approved by Cabinet, provide the legal and policy foundation for this process.

Setting an NDC requires dedicated resources, inclusive and whole of society engagement and consultation, better integration across government departments, and alignment with Sectoral Emissions Targets (SETs). The NDC should reflect strategic choices made through the processes established in the Climate Change Act, including the national GHG trajectory, SETs, carbon budgets, and mitigation plans. For this reason, it is critical that all stakeholders and all spheres of government are actively involved in shaping and implementing these commitments. Domestically, the enactment of the Climate Change Act (Act No. 22 of 2024)² fundamentally reconfigures South Africa's climate governance by introducing binding regulatory instruments, including a gazetted national emissions trajectory and Sectoral Emission Targets (SETs).³

2 The Republic of South Africa. 2024. Climate Change Act (Act No. 22 of 2024). Government Gazette 50966, 23 July 2024.

3 Department of Forestry, Fisheries and the Environment. 2024. Sectoral Emissions Targets 2025 to 2030: Implementation of South Africa's updated Nationally Determined Contribution. DFFE.

The decision about an NDC is ultimately a political one, our mitigation ambition is tracked locally through the gazetted GHG emissions trajectory. The NDC reflects and communicates that decision in line with international requirements. The recommendations in this report are therefore intended to inform and influence the contents of the local emissions trajectory and, by extension, the international representation of that trajectory through South Africa's NDC. While there is strong evidence that a climate-compatible transition is both possible and desirable, not everything can be modelled, and data alone cannot guide us through a world of accelerating uncertainty. This is a moment of political clarity and moral leadership: one that requires revisiting the available evidence, recognising its limitations, and choosing to act in the public interest.⁴

1.2. South Africa's approach to climate change

South Africa's approach to climate change has evolved significantly, as evidenced by the strengthening of domestic policies and legislation, as well as by the commitments outlined in our current NDCs on the international stage. The enactment of the Climate Change Act (Act No. 22 of 2024) fundamentally reconfigures South Africa's climate governance by introducing binding regulatory instruments. The Climate Change Act confers binding obligations, including gazetting the mitigation system which includes the national emissions trajectory, establishment of SETs, sectoral carbon budgets, the forthcoming National Adaptation Strategy and Plan, and national monitoring, reporting and verification systems. These instruments enhance policy coherence, accountability, and enforceability of South Africa's climate goals and resilience efforts. Importantly, the updates to the NDC will be developed within the framework of the Climate Change Act's legal architecture, giving effect to the country's climate commitments and the Just Transition Framework, and outlining the actions that the government and its social partners will take to achieve a just transition.

South Africa's updated Nationally Determined Contribution (NDC) for the 2030–2035 period comes at a pivotal moment in the global and domestic climate landscape. The international climate regime has moved into a new phase following the first Global Stocktake and the adoption of the United Arab Emirates (UAE) Consensus at COP28⁴, which reinforced the need for heightened ambition, economy-wide targets, and a just, equitable transition away from fossil fuels. Moreover, under the Paris Agreement's ratchet mechanism, countries are expected to submit progressively more ambitious NDCs over time, reflecting its *Common but Differentiated Responsibilities and Respective Capabilities*.⁵ In the global climate regime, common but differentiated responsibilities and respective capabilities recognises that while all countries must act on climate change, their responsibilities and capacities differ based on historical emissions and current capabilities. South Africa's 2030–2035 NDC is part of this global effort to increase ambition in response to worsening climate risks.

South Africa's 2030–2035 NDC update will represent far more than a set of emissions targets, it is also a platform to communicate national adaptation goals and to articulate the means by which we intend to achieve our climate commitments. This includes reporting on efforts to build climate resilience and secure the finance and support necessary to implement both mitigation and adaptation measures. The updated NDC will signal our strategic intent to the world. In the context of worsening physical climate risks, growing trade and finance pressures, and deep domestic inequality, the 2030–2035 NDC should be

⁴ United Nations Framework Convention on Climate Change. 2023. Decisions adopted by the Conference of the Parties at COP28 – The UAE Consensus. UNFCCC.

⁵ United Nations Framework Convention on Climate Change. 2015. Paris Agreement. UNFCCC. Available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf

used to report the transformation of the South African economy to the world. It must respond to global realities, while rooted in the lived experience and aspirations of South Africans. It must also reflect the political and governance intentions and articulate South Africa's collective development pathway. In doing so, it signals our intent to both domestic stakeholders and international partners, while clearly reporting the allocation of responsibilities across all spheres of government.

1.3. Purpose and Origins of an NDC

NDCs reflect both ambition and national circumstances, aiming to limit global warming to well below 2°C and preferably to 1.5°C. The NDC also reflects the country's position on fairness, ambition, and capability, thereby demonstrating how it intends to contribute to the global effort to limit temperature rise while pursuing national development priorities. An NDC is the cornerstone of a country's climate action plan under the Paris Agreement⁶. As defined in the Climate Change Act, an NDC is the vehicle through which South Africa transparently communicates its national GHG trajectory, adaptation priorities, and means through which these commitments can be achieved to the local and international communities. The legally binding emissions trajectory itself is gazetted separately by the Minister, with the NDC serving as the international reporting mechanism for this and related commitments. The NDC also functions as a platform to integrate and signal progress across domestic strategies including the Low Emissions Development Strategy (LEDS)⁷, the National Development Plan (NDP)⁸, and the Just Transition Framework⁹.

The current NDC, adopted in 2021 (see Figure 1 below), has served as South Africa's official emissions pathway in the absence of a gazetted emissions trajectory under the Climate Change Act. With the forthcoming publication of the trajectory under Section 24 of the Climate Change Act¹⁰, the 2030–2035 NDC now offers an opportunity to transparently report that domestic decision internationally, while also reinforcing the alignment of climate ambition with national development goals and long-standing structural inequalities.

⁶ United Nations Framework Convention on Climate Change. 2015. Paris Agreement. UNFCCC. Available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf

⁷ Department of Forestry, Fisheries and the Environment. 2020. South Africa's Low Emission Development Strategy 2050. DFFE.

⁸ National Planning Commission. 2012. National Development Plan 2030. The Presidency, Republic of South Africa.

⁹ Presidential Climate Commission. 2022. A Framework for a Just Transition in South Africa.

¹⁰ The Republic of South Africa. 2024. Climate Change Act (Act No. 22 of 2024). Government Gazette 50966, 23 July 2024.

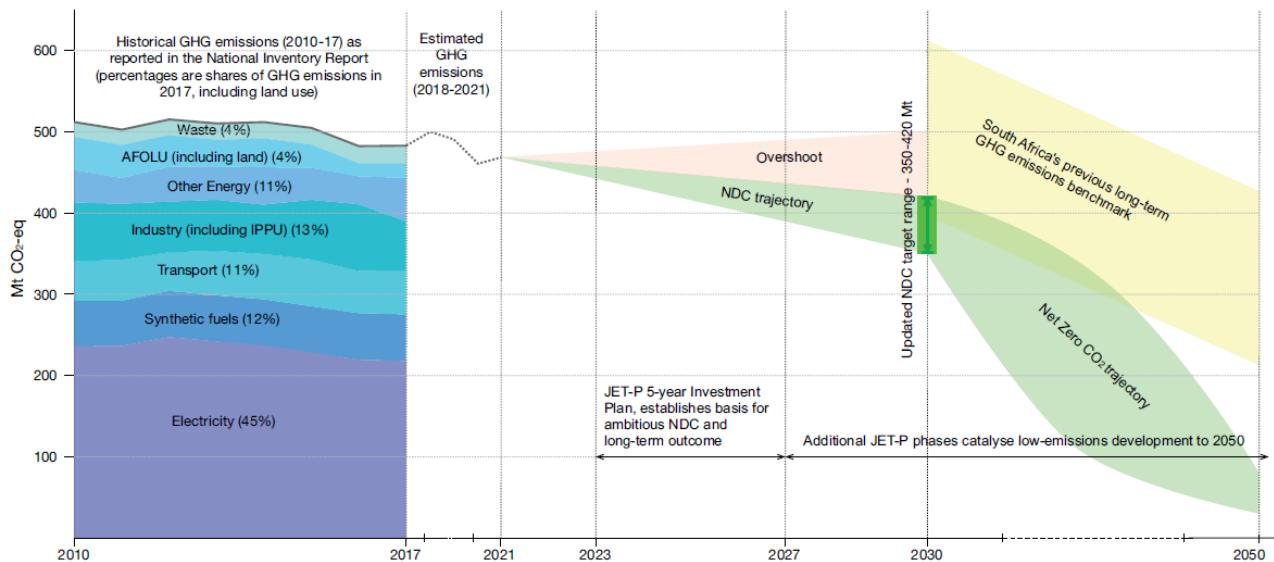


Figure 1: South Africa's historical emissions and 2021 NDC targets¹¹

The Paris Agreement requires that each successive NDC builds on the previous one, reflecting increased ambition, in line with a country's national context and capabilities. This requirement must be understood not as a burden, but as an invitation to identify new opportunities that will mitigate risks and contribute towards GDP growth. South Africa has consistently demonstrated leadership and credibility in international climate diplomacy.

In line with the UAE Consensus¹² and Paris Agreement¹³ expectations, South Africa's updated NDC must demonstrate:

- Progression in ambition compared to the 2021 NDC;
- Economy-wide coverage of all major GHGs and sectors;
- Specific, time-bound sectoral targets and milestones;
- Enhanced adaptation and resilience planning;
- Strong implementation support (finance, capacity, and institutional mechanisms); and
- Transparent reporting and tracking systems.

A successful NDC must be credible to both domestic and global actors: that South Africa intends to meet its development goals in ways that are aligned with the science, that are just and equitable, and that enable long-term resilience. It will align with long-term climate resilience and sustainable development goals, rooted in South Africa's lived socio-economic realities and international responsibilities under the Paris Agreement.

¹¹ United Nations Framework Convention on Climate Change. 2021. South Africa's First Nationally Determined Contribution Under the Paris Agreement, Updated 2021. UNFCCC.

¹² United Nations Framework Convention on Climate Change. 2021. South Africa's First Nationally Determined Contribution Under the Paris Agreement, Updated 2021. UNFCCC.

¹³ United Nations Framework Convention on Climate Change. 2015. Paris Agreement. UNFCCC. Available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf

2. Stakeholder Views

The recommendations in this report are informed not only by science and economic analysis, but also by extensive consultation with a wide range of stakeholders. The voices of civil society, labour, business, academia, faith-based groups, local government, gender constituencies, and youth have all contributed to the development of this submission. Through this process, the PCC aims to support a nationally owned, evidence-informed, and justice-driven NDC that is aligned with South Africa's long-term development goals.

The PCC hosted several stakeholder engagement sessions with labour, civil society, business, local and provincial government, youth, faith and the gender advisory working group to capacitate stakeholders and to unpack climate risks (both physical and transitional) and discuss what should be contained in the 2035 NDC update. These sessions were hosted in-person and online. Table 1 attempts to capture some of the key considerations arising from stakeholder engagement sessions as they pertain to each of the components of the NDC submission. Taking these stakeholder values into consideration for the development of the NDC recommendations ensures that stakeholder voices are considered within the NDC update process.

These stakeholder inputs were captured in detail in a complimentary report "Stakeholder Perspectives on the NDC Recommendations for 2030 - 2035".

Table 1: High level thematic summary of stakeholder perspectives

Component	Thematic Area	Description
Just Transition	Procedural justice and inclusivity	There was broad consensus that a just transition must be inclusive, participatory, and grounded in local realities. Civil society, youth, faith, and labour groups called for co-designed climate responses that prioritise engagement with vulnerable and historically marginalised groups. Local government representatives echoed these calls, stressing that municipalities must be properly included in climate governance structures.
	Policy alignment	All stakeholders emphasised the need for policy alignment across all spheres of government. Local government, business, and civil society stressed the need for the NDC to be embedded within existing national policy frameworks such as the integrated Resource Plan (IRP) and the National Development Plan.
	Gender perspectives	Gender equality was repeatedly cited as a core dimension of climate justice. The gender advisory working group emphasised that women face disproportionate burdens from climate impacts and often lack access to decision-making spaces. Participants stressed that gender-responsive implementation must go beyond vulnerability framing to recognise women's leadership, innovation, and enterprise in climate action.
	Economic and employment considerations	All stakeholders agreed that job creation, skills development, and decent work must be central to all aspects of NDC implementation. Thus, the NDC should culminate in sustainable economic growth opportunities and leveraging of existing opportunities such as renewable energy value chains and the circular economy.
Adaptation	Adaptation ambition	Roundtable discussions reinforced the need to define adaptation ambition in terms of structural transformation, embed adaptation in strategic infrastructure and coastal planning, and elevate

		implementation credibility through real-time data, disaggregated indicators, and stronger accountability systems.
	Indigenous Knowledge	Civil society and faith participants highlighted the need to embed local practices and cultural heritage into climate planning, warning that current top-down approaches often overlook these assets.
Mitigation	NDC target range and ambition	There was divergence on how ambitious the NDC should be and the feasibility of implementation, notably, some labour and government representatives warned that the NDC target range should not exacerbate job losses, especially in vulnerable regions, and that it could exacerbate socio-economic inequality if not paired with clear mitigation support measures and policy certainty.
	Transitional Technologies	Views differed on the inclusion of transitional or controversial technologies such as natural gas and nuclear energy. Some stakeholders endorsed this as a reliable energy mix, while others opposed these based on cost, safety, waste management, and procedural justice.
Means of Implementation	Finance Structures and Instruments	Divergent views were expressed. Civil society, labour, and the gender advisory group favoured grants and public finance to protect vulnerable groups from indebtedness. In contrast, business supported blended finance, private capital mobilisation, and market-based approaches.
	Adaptation financing and prioritisation	There was broad consensus that both mitigation and adaptation remain underfunded. However, adaptation still lags behind mitigation with regards to finance flows and is often secondary in policy despite increasing climate risks.
	The role of local government	Local government stakeholders emphasised that municipalities are on the front lines of climate implementation but face substantial barriers, including unfunded mandates, misaligned policies, and capacity gaps. There was consensus across stakeholder groups that without empowering local government, NDC targets will not be realised.



3. Adaptation

South Africa's Climate Change Act² emphasises inclusive development, job creation, ecosystem restoration, urban planning, and equitable access to infrastructure. The forthcoming NDC update must align with the Climate Change Act's provisions, including its references to the National Climate Change Adaptation Strategy (NCCAS).¹⁴ Moreover, the recently adopted UAE Framework for Global Climate Resilience¹⁵ clarifies enhanced expectations for adaptation efforts. Countries are now expected to:¹⁶

- Set sectoral and thematic targets for key systems such as water security, food systems, public health, resilient infrastructure, and ecosystems, with these targets to be reflected in future NDCs.
- Shift towards forward-looking progress metrics, tracking outcomes and resilience-building over time rather than solely listing adaptation activities.
- Systematically integrate equity, inclusivity, and justice principles into adaptation planning and implementation, building on existing commitments but requiring strengthened and explicit incorporation aligned with evolving global best practices.

3.1. The Urgency of Adaptation

Physical climate risks in South Africa are increasing in frequency and intensity, with differentiated regional and sectoral impacts that will intensify under higher warming scenarios.

Scenario-based modelling aligned with the IPCC's SSP-RCP framework shows that under a high emissions pathway (SSP5-8.5), South Africa could experience warming exceeding 5°C nationally by 2100, significantly intensifying drought, heatwaves, flooding, and coastal storm risks. An intermediate pathway (SSP2-4.5) may result in approximately 2.5–3°C warming, while a low emissions scenario (SSP1-2.6) offers a more manageable trajectory consistent with 1.5–2°C warming, although residual risks remain even under this scenario.¹⁷

The UNFCCC 2024 NDC Synthesis Report¹⁸ assessed the collective impact of countries' current NDCs on projected global emissions by 2030. It concludes that, even if fully implemented, these pledges remain insufficient to meet the temperature goals of the Paris Agreement. Climate models show that global temperatures are likely to rise above 2°C if current global emissions trends continue.

This presents a critical concern for South Africa, as the country is warming at nearly double the global average rate. These shifts are translating into significant material damage to infrastructure, disruptions to basic services, reduced agricultural productivity, and disproportionate harm to poor and marginalised communities. We could face temperature increases of between 2°C and 5°C across different regions by

¹⁴ Department of Forestry, Fisheries and the Environment. 2020. South Africa's National Climate Change Adaptation Strategy. DFFE.

¹⁵ UNFCCC. 2023. Decision -/CMA.5: Outcome of the first Global Stocktake. United Nations Framework Convention on Climate Change. Available here: <https://unfccc.int/documents>

¹⁶ UNFCCC. 2023b. NDC Synthesis Report – February 2024. United Nations Framework Convention on Climate Change. Available here: <https://unfccc.int/documents/636637>

¹⁷ Presidential Climate Commission & African Climate Foundation. 2025. Climate Risk Report of South Africa. Presidential Climate Commission.

¹⁸ United Nations Framework Convention on Climate Change. 2024. Nationally Determined Contributions under the Paris Agreement: Synthesis Report by the Secretariat. UNFCCC.

the end of the century. These rising temperatures will have wide-ranging effects on health, food production, water availability, and infrastructure.

The economic implications of these changing climate conditions will include GDP losses driven by productivity declines, infrastructure damage, food system disruption, and impacts on health, tourism, and trade:^{19,20}

- Maize yields could fall by up to 75% in extreme warming scenarios.
- Flooding in coastal cities like Durban already causes billions in damage.
- Water shortages are disrupting energy supply and food production.
- Heatwaves are limiting manual labour and driving fatalities, particularly among vulnerable groups.

Acknowledging current temperature trends does not imply that ambitions towards lower limits should be abandoned. South Africa must plan for higher warming outcomes while continuing to support global efforts to limit warming as much as possible. Fragmented responses are no longer tenable. Immediate adaptation measures are essential to avert loss of life and safeguard development gains. A step-change in ambition, implementation, and accountability is urgently needed to align South Africa's adaptation efforts with its NDC goals, the Paris Agreement's Article 7 requirements, and the emerging expectations under the Global Goal on Adaptation (GGA) framework.²¹ Without such proactive interventions, the human and economic costs of climate impacts could rise sharply, further entrenching inequality and ecological degradation²¹.

Adopting an ambitious, science-aligned NDC is not only about meeting South Africa's international obligations under the Paris Agreement—it is a strategic necessity for securing the country's long-term development. Climate impacts are already straining critical systems such as water, agriculture, health, human settlements, and infrastructure. As these pressures intensify, the risk of these systems being pushed beyond their adaptive capacity grows, leading to non-linear and compounding socio-economic losses. Without rapid emissions reductions, South Africa could cross irreversible thresholds where adaptation alone will no longer be enough to prevent severe developmental setbacks.

To avoid these outcomes, South Africa's updated NDC must include ambitious and clearly defined adaptation targets. These targets are essential to protect national development priorities, reduce inequality, and avoid escalating future response costs. By linking its NDC to measurable risk reduction outcomes and socio-economic resilience, South Africa can position itself as both globally credible and domestically forward-looking—unlocking investment, strengthening public trust, and driving a just and inclusive transition

3.2. Adaptation Progress Since the 2021 NDC

South Africa's first Biennial Transparency Report (BTR1), published in 2024²¹, provides the first comprehensive assessment of adaptation progress since the submission of the 2021 Updated NDC. While important groundwork has been laid, BTR1 highlights that progress on adaptation goals remains uneven, with significant shortfalls in financing, implementation capacity, and institutional integration.

¹⁹ Scholes, R.J., Coetzer, K.L., Matsika, R., et al. 2023. A Delphi assessment of climate change risks in southern Africa in the 21st century. *Climate Risk Management* 42: 100566.

²⁰ World Bank. 2022. *South Africa Country Climate and Development Report*. World Bank.

²¹ Republic of South Africa. 2024. *South Africa's First Biennial Transparency Report (BTR1)*. Department of Forestry, Fisheries and the Environment. Available here: <https://unfccc.int/documents/645057>

Simultaneously, updated climate risk assessments reaffirm that South Africa's vulnerability to climate change is increasing across all sectors and regions, heightening the urgency of scaling up adaptation efforts²¹.

The 2021 Updated NDC set out five national adaptation goals: reducing vulnerability, integrating adaptation into planning, strengthening institutional capacity, improving information and early warning systems, and mobilizing resources. According to BTR21:

- **Policy and Planning:** Progress has been made in developing sectoral adaptation plans, updating vulnerability assessments, and initiating the integration of climate risks into development frameworks.
- **Early Warning Systems:** Improvements have been noted in expanding disaster early warning systems, though coverage remains uneven, especially in rural areas.
- **Institutional Strengthening:** The Climate Change Act² provides a legal framework for adaptation governance, mandating the development of National Adaptation Plans and sectoral strategies.

However, BTR²¹ also reveals persistent implementation challenges:

- **Adaptation Finance Shortfalls:** South Africa received approximately USD 816.9 million in international climate finance during 2021–2022, with most of this support provided as concessional loans rather than grants. Of this total, only about USD 7.64 million was clearly identified as adaptation finance in the BTR, including both explicitly adaptation-labelled and cross-cutting projects. Thus, highlighting the fact that adaptation finance represents a small subset of total climate finance flows, reflecting ongoing challenges in mobilising sufficient funds to meet South Africa's climate adaptation needs and ambitions outlined in its NDC. This falls far short of the NDC's expectation of mobilizing approximately USD 8 billion annually for mitigation and adaptation combined.
- **Implementation Barriers:** Capacity constraints at provincial and municipal levels continue to delay adaptation action. Many local governments lack the technical expertise, financial resources, and institutional support necessary to implement NCCAS priorities or mainstream adaptation into Integrated Development Plans (IDPs).
- **Limited Social Inclusion:** Although national strategies acknowledge the importance of Indigenous knowledge and gender-responsive approaches, these principles are not yet systematically embedded in adaptation planning and implementation at scale.
- **Loss and Damage:** Despite escalating climate impacts—including the devastating 2022 floods in KwaZulu-Natal—no formal national framework has been established to quantify or systematically address loss and damage.

Sector-specific vulnerability assessments highlight that agriculture, water management, human settlements, energy infrastructure, and health systems remain critically exposed to escalating climate risks²¹.

South Africa's 2024 BTR1 confirms that important institutional and policy foundations for adaptation have been established since the 2021 Updated NDC. However, adaptation progress is falling behind the pace and scale needed to match the country's growing climate risks. Persistent gaps in finance, local implementation capacity, data systems, and inclusive planning threaten to undermine the achievement of national adaptation goals.

3.3. Priority Systems for Resilience

Strengthening resilience in the preferred low-emissions scenario (SSP1-2.6) demands proactive adaptation efforts that enable forecast (early-warning), adaptation, and recovery. The NCCAS, supported by scenario-based analysis, provides a foundation for action^{22,14} However, priority interventions are needed to avoid maladaptation and ensure resilience within the desired pathway²³.

Three critical systems, aligned with the Climate Change Act, should be prioritised in the 2030–2035 NDC: agriculture and food security, the built environment (including spatial planning and transport) and water². These systems are already under pressure and face escalating climate risks. Prioritisation must be based on the socio-economic consequences of system failure, not just on how exposed it is to climate risks.²³. Climate-smart investment should be linked to employment creation, gender equity, and social protection for vulnerable communities in climate-exposed sectors.²². Adaptation priorities must reflect local climate projections and sector-specific risks.²³ Furthermore, **quantifiable, sector-specific targets** should be set to represent a new and more ambitious approach to adaptation planning in South Africa, aiming to operationalise adaptation efforts with **clear, measurable outcomes**. Time-bound adaptation milestones for 2030 and 2035 should be integrated into the NDC, aligned with the Climate Change Act and the National Climate Change Adaptation Strategy (NCCAS), to enable measurable progress in priority systems such as water, agriculture, settlements, and health. These milestones support outcome-oriented planning and respond directly to the Global Goal on Adaptation and Enhanced Transparency Framework under the Paris Agreement, which call for clearer targets and indicators to track adaptation effectiveness.

3.3.1. Water Security

Water scarcity and contamination risks are intensifying.²³ At the same time, flooding and storm damage reveal weaknesses in water infrastructure. Water systems are under growing strain from both scarcity and excess. The western and southern parts of the country face prolonged droughts and declining soil moisture, while the eastern regions are experiencing more intense rainfall and flooding.²³

To build resilience, the PCC recommends that the updated NDC should support:

- **Ecosystem-based water management**, including wetland restoration, catchment rehabilitation, and green infrastructure for urban water buffering.
- **Improved water governance and cross-sector coordination**, particularly between DWS, local government, and sectors such as energy and agriculture.
- **Integrated climate and water risk mapping**, to inform municipal service planning, infrastructure investment, and disaster response.
- **Scaling of water harvesting, reuse, and demand-side efficiency** (e.g., fixing leaks, upgrading irrigation, promoting climate-resilient crops).

3.3.2. Built Environment, Spatial Planning and Transport

²² Chambers, J.M. et al. 2022. Six modes of co-production for sustainability. *Nature Sustainability*.

²³ World Bank. 2021. Designing the Theory of Change of a Community of Practice. Collaboration for Development.

Available at: https://collaboration.worldbank.org/content/sites/collaboration-for-development/en/groups/communities4Dev/blogs.entry.html/2021/03/22/designing_the_theoryofchangeofacommunityoffp-f9pp.html

Urban areas are increasingly exposed to floods, heatwaves, and infrastructure failures due to Climate Change.²³ Spatial planning must integrate climate risk considerations while promoting equitable development.²² Public and non-motorised transport systems, such as buses, trains, walking, and cycling, are essential for ensuring resilient urban mobility. The PCC recommends that adaptation should continue to be embedded in land use planning, housing design, and urban infrastructure.

Embedding adaptation in the built environment can be actioned through planning, design, and delivery:

- **Requiring climate risk assessments** in all land-use planning, zoning, and housing approvals.
- **Updating building codes and urban design standards** to account for increased heat, flooding, and storm risks.
- **Elevating critical infrastructure** above projected flood lines and design transport systems with resilience (e.g. multiple modes, permeable pavements, heat-resilient materials).
- **Mandating green and grey infrastructure integration** (e.g. wetlands for flood control, tree canopies for urban cooling).
- **Training local governments** to use climate-informed spatial tools (e.g. GIS overlays, early warning systems)
- Integrate climate risk into **coastal** spatial planning and infrastructure, prioritising nature-based solutions (restoring natural buffers), **strengthening coastal infrastructure**, and **protecting vulnerable communities** and assets.
- **Improve climate resilience of transport systems** through risk-informed infrastructure planning, expanded public and non-motorised transport, including sustainable urban street design, public space improvement, densification, and modal shifts.

3.3.3. Agriculture and Food Security

South Africa's food systems are at risk of being disrupted by climate change, particularly in rural areas where livelihoods depend on climate-sensitive agriculture. Rising temperatures and unpredictable rainfall are reducing crop yields, threatening household nutrition, and increasing food insecurity.²³ To address these risks, the PCC recommends that the NDC should consider:

- **Investment in climate-smart agriculture**, including drought-resistant seed varieties, conservation tillage, and agroecological practices.
- **Targeted support for smallholder and subsistence farmers**, through improved extension services, climate information, insurance, and market access.
- **Expansion of early warning systems and seasonal forecasting**, especially in areas with high climate sensitivity and low adaptive capacity.
- **Mainstreaming food system resilience** in rural development strategies and agricultural master plans – including links to land reform, gender equity, and youth employment.
- **Support community-driven agricultural practices** emphasizing local autonomy over food production, distribution, and consumption to enhance food sovereignty.
- **Improve access to local markets** and encourage the use of local resources to reduce dependency on external agricultural inputs.

3.3.4. Human Health and Social Protection

Climate change is already affecting public health in South Africa through increased exposure to heatwaves, worsened air quality, and changes in disease patterns, particularly in vulnerable urban and rural communities.²⁴ Integrated adaptation strategies must strengthen both public health systems and social protection mechanisms. This includes:

- **Enhancing surveillance and response** to climate-sensitive disease outbreaks.
- Establishing disaster early warning systems and triggers, particularly for heatwaves in urban areas.
- Expanding public awareness campaigns on climate-health risks.

3.3.5. Energy Resilience and Access

South Africa's vulnerability to energy supply disruptions is compounded by climate-related hazards, including heatwaves, flooding, and drought, which threaten both generation and distribution systems. In recent years, extreme weather has compounded the electricity crisis, with intense rainfall making coal reserves too wet to use and damaging distribution infrastructure, while heatwaves increase cooling demand and reduce worker productivity in the energy sector.²⁵ Adaptation planning must integrate energy resilience to address both supply and access challenges. Actions should include:

- Integrating distributed renewable energy systems into national and municipal energy planning.
- **Promoting off-grid solutions** for vulnerable communities.

This will help reduce dependency on centralised infrastructure, mitigate service disruption, and expand access to clean energy.

3.3.6. Integrated Nature-Based Solutions

Nature-based solutions must be framed as cross-cutting interventions. They should be systematically integrated into water, agriculture, urban planning, and coastal resilience strategies. Expanding urban green spaces (e.g., parks, forests, green corridors) and restoring coastal ecosystems (e.g., dunes, mangroves) are critical for climate buffering and co-benefits including biodiversity and quality of life.

3.4. Transformative and Justice-based Adaptation

Promoting inclusive and justice-centred adaptation requires a deliberate focus on the needs and priorities of the most vulnerable groups, such as women, youth, and informal workers, during both the planning and implementation of adaptation initiatives. It is essential to develop adaptive social protection mechanisms, for example early warning systems, to enhance the resilience of these populations to climate shocks.^{9,22}

Adaptation must address systemic drivers of vulnerability such as spatial inequality, weak infrastructure, and marginalisation.^{9,22} Priorities in this regard should focus on a shift from pilot projects to structural reforms that reduce vulnerability at scale is required.²²

²⁴ Republic of South Africa. 2019. *Carbon Tax Act No. 15 of 2019*. Government Gazette No. 42483, 23 May 2019. Pretoria: Government Printer.

²⁵ NBI. 2022. *South Africa's Net-Zero Transition*. National Business Initiative.

Efforts should institutionalise Indigenous Knowledge and ensure meaningful community participation. This requires imbedding participatory processes across governance levels, such as enabling community-led vulnerability assessments and co-designed context-specific adaptation strategies.^{9,22}

Adaptation must reflect the values of distributive, restorative and procedural justice.^{2,9,22} Responses should prioritise the most vulnerable, avoid reinforcing inequality, and maximise co-benefits such as job creation, health gains, and ecosystem restoration.^{2,22} These principles are embedded in the Just Transition Framework and should be considered in the NDC update.²

Operationalising distributive, restorative and procedural justice can be actioned through:

- **Prioritising adaptation investments** in communities most exposed to physical risks, especially informal settlements, rural areas, and historically disadvantaged regions.
- **Equipping vulnerable groups** (e.g. women, youth, people with disabilities) with skills and assets to participate in adaptation economies, with a focus on enabling pathways into adaptation-linked employment (e.g. ecological restoration, flood protection, sustainable agriculture, green infrastructure).
- **Using adaptation financing strategically** to support job creation and livelihood opportunities in the green economy.
- **Institutionalising bottom-up participation** by requiring community consultations in the design of local adaptation plans and spatial strategies.
- **Supporting participatory platforms** and social dialogue mechanisms that allow communities to define their own adaptation priorities.
- **Strengthening inclusive insurance systems** for smallholders and developing financial safety nets for workers in climate-vulnerable sectors (e.g. informal traders, tourism workers, subsistence farmers).
- **Ensuring transparency and accountability** in adaptation finance decisions, with clear feedback loops, particularly in locally led adaptation initiatives.

Effective adaptation is not only a domestic necessity, it helps build international confidence in South Africa's climate commitments by demonstrating that the country is taking steps to align its adaptation plans with the latest scientific evidence. It enhances our ability to attract investment, manage risk, and retain global competitiveness. South Africa's NDC must show that we are planning for known risks and acting on them. Adaptation, when done justly, becomes a pathway to inclusive and resilient development.^{2,9,22}

3.5. Policy and Regulatory Strengthening

It is imperative to accelerate the full implementation of the Climate Change Act to strengthen South Africa's climate resilience and fulfil its international commitments. The Act establishes a comprehensive framework for a coordinated national climate response, emphasising both mitigation and adaptation strategies.^{2,22}

The Act mandates the development of the forthcoming National Adaptation Strategy and Plan along with sector-specific adaptation strategies to guide the country's response to climate change impacts.^{2,22} It also requires provinces and municipalities to assess climate risks and develop corresponding adaptation

plans.² These provisions aim to integrate climate adaptation into all levels of government planning and decision-making, ensuring a cohesive and effective response to climate challenges.^{2,22}

Nevertheless, the successful implementation of the Act depends on the timely establishment of supporting regulations and institutional structures.² This includes finalising regulations that operationalise the Act's provisions, empowering mandated bodies such as the PCC and Provincial Climate Change Forums and ensuring adequate resources and capacities at all levels of government.²²

Local governments are critical frontline actors in climate adaptation, yet they often remain under-resourced and lack the necessary support to fulfil their mandates effectively. Strengthening their role requires the establishment of dedicated financial access channels to ensure municipalities can secure funding for adaptation initiatives. It is also essential to provide capacity support for adaptation planning, risk screening, and public engagement, enabling local authorities to make informed and inclusive decisions. Adaptation should be systematically integrated into Integrated Development Plans (IDPs) and local disaster management frameworks to align climate action with broader development goals.²²

Furthermore, adaptation responsibilities must be formalised across all levels of government. This includes mandating the development of Provincial Response Strategies and Municipal Climate Plans, as stipulated by the Climate Change Act. Expanding municipal and provincial capacity, particularly in vulnerable regions, is also crucial and should be achieved through targeted training, planning tools for IDPs and sustained financial support.^{2,22}

Finally, effective adaptation governance depends on enhanced coordination, both vertically between national and local governments and horizontally across sectors. Adaptation must be embedded into economic development and fiscal planning processes, such as through Treasury-led climate budget tagging.¹⁴ Regional collaboration should be strengthened through shared early warning systems, coordinated disaster response planning, and joint adaptation strategies with neighbouring countries. This approach is consistent with the NCCAS²²¹⁴, South Africa's National Disaster Management Framework²⁶, and SADC protocols²⁷, and aligns with the UNFCCC Global Goal on Adaptation²⁸ call for transboundary risk governance. Such cooperation enhances resilience, avoids duplication, and supports efficient responses to climate impacts that span borders.

By prioritising these actions, South Africa can effectively translate its climate policies into tangible outcomes, enhancing the country's resilience to climate impacts and contributing to global climate goals.

3.6. Elevating Adaptation Ambition, Governance and Institutional Capacity

The adaptation component of the NDC should enable a move from static policy reporting to dynamic, learning-oriented implementation, aligning with the principles of the Paris Agreement and best practice

²⁶ Department of Cooperative Governance. 2023. National Disaster Management Framework of 2023. Pretoria: Republic of South Africa.

²⁷ Southern African Development Community. 2022. *Disaster Risk Management Strategy and Action Plan 2022–2030*. Gaborone: Southern African Development Community.

²⁸ GCF. 2018. *DBSA Climate Finance Facility – FP098*. Green Climate Fund. Available at: <https://www.greenclimate.fund/project/fp098>

under the Global Goal on Adaptation^{29,30} by adopting an AAR framework to define adaptation logic and implementation:

- **Anticipate:** Scale climate foresight, hazard mapping and early warning systems across vulnerable regions.
- **Adapt:** Integrate climate risk into development planning and expand ecosystems-based adaptation.
- **Recover:** Rebuild systems post-shocks in a transformative and resilient manner.

This governance-centred AAR framework should be guided by the Climate-Resilient Development (CRD)³¹ paradigm, which provides the strategic vision and normative orientation for adaptation, integrating principles of justice, sustainability, and systemic transformation. Within this paradigm, adaptation goals must be strategically aligned with Knowledge Co-Production³² to embed diverse knowledge systems and inclusive decision-making and Transformative Adaptation³³ to address root causes of vulnerability and enable systemic change. This ensures that adaptation efforts not only address physical climate risks but also tackle deep-rooted socio-economic vulnerabilities and systemic inequalities.

To operationalise the AAR framework a formal Theory of Change (ToC)^{34,35} should be integrated into adaptation planning. The ToC provides a structured framework for tracing how inputs and actions lead to short-, medium-, and long-term outcomes and impacts, including institutional reforms and equity-driven change. It enables both strategic clarity and adaptive learning by making assumptions explicit, supporting feedback loops, and linking interventions to measurable resilience, inclusion, and development outcomes.

To be effective, monitoring, evaluation, and learning (MEL) systems must extend beyond output tracking to include indicators of systemic resilience, social equity, and institutional transformation. The adaptation component of South Africa's NDC should be fully aligned with statutory instruments outlined in the Climate Change Act, including the NCCAS.^{2,22}

A national integrated adaptation MEL system should be established to track adaptation progress in line with both the Climate Change Act and the Enhanced Transparency Framework under the Paris Agreement. This system should include an Annual Adaptation Dashboard to publicly report on key output, outcome, and impact indicators, offering a transparent overview of progress.

Crucially, the MEL system must be participatory and inclusive, incorporating community-based metrics and enabling feedback loops that enable real-time learning and course correction. This inclusive approach

²⁹ United Nations Framework Convention on Climate Change. 2015. Global Goal on Adaptation (GGA). UNFCCC.

³⁰ United Nations Framework Convention on Climate Change. 2023. Glasgow–Sharm el-Sheikh Work Programme on the Global Goal on Adaptation. UNFCCC. Available at: <https://unfccc.int/topics/adaptation-and-resilience/workstreams/glasgow-sharm-el-sheikh-work-programme-on-the-global-goal-on-adaptation>

³¹ Presidential Climate Commission. 2022. Guidance for Putting Climate-Resilient Development Pathways into Practice (Technical Series). PCC.

³² Chambers, J.M. et al. 2022. Six modes of co-production for sustainability. *Nature Sustainability*.

³³ IPBES. 2023. Transformative Change Assessment. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

³⁴ World Bank. 2023. Theory of Change. Development Impact Evaluation (DIME), World Bank. Available at: https://dimewiki.worldbank.org/Theory_of_Change

³⁵ World Bank. 2021. Designing the Theory of Change of a Community of Practice. Collaboration for Development. Available at: https://collaboration.worldbank.org/content/sites/collaboration-for-development/en/groups/communities4Dev/blogs.entry.html/2021/03/22/designing_the_theoryofchangeofacommuinityofp-f9pp.html

will ensure that adaptation efforts are grounded in local realities, responsive to evolving risks, and aligned with principles of climate resilience and justice.

3.7. Scaling and Integration of Adaptation Finance

South Africa faces a significant shortfall in the finance required to meet its adaptation needs, with only \$7.6 million in adaptation-specific funding received to date, far below the estimated \$3 to \$4 billion needed by 2030.³⁶

To address this gap, the adaptation component of South Africa's NDC must be more closely linked to both domestic and international financing mechanisms. This includes embedding adaptation finance within national budget systems, such as the Medium-Term Expenditure Framework, and implementing climate budget tagging to better track and allocate resources.³⁷

Grants and concessional finance should be directed toward community-scale and ecosystem-based adaptation investments, which are often the most effective and equitable forms of intervention. Expanding access to these funding types will require the development of a robust pipeline of bankable adaptation projects that are well-aligned with both domestic priorities and donor expectations. Moreover, South Africa should position itself to access international sources of finance, including emerging mechanisms like the Loss and Damage Fund and commitments under the UAE Consensus.³⁸

Aligning domestic efforts with these global frameworks will be essential to unlocking the scale of finance needed to close the adaptation gap.

3.8. National Loss-and-Damage Response Framework

Climate-related disasters are already imposing heavy economic and social costs, yet South Africa lacks a system to quantify, attribute or finance these losses. The forthcoming National Adaptation Strategy and Plan, due under the Climate Change Act, should therefore embed a National Loss-and-Damage Response Framework explicitly aligned with Disaster Risk Reduction (DRR) principles. This framework should systematically integrate disaster preparedness, prevention, and recovery planning across governance structures at national, provincial, and municipal levels. Co-led by DFFE and the NDMC and backed by a Treasury-managed finance window, the framework would standardise loss accounting, set clear eligibility rules and channel rapid, transparent funding to affected communities. Additionally, embedding DRR principles will ensure proactive measures are prioritized, reducing vulnerabilities and enhancing resilience to future climate-related shocks.

³⁶ Department of Forestry, Fisheries and the Environment. 2024. South Africa's Fourth National Communication (NC4) to the UNFCCC. DFFE.

³⁷ National Treasury. 2024. Budget Review 2024. Republic of South Africa.

³⁸ United Nations Framework Convention on Climate Change. 2023. Decision -/CMA.5: UAE Consensus. UNFCCC.

4. Mitigation

In the 2021 Updated First NDC, South Africa's mitigation ambition (Table 2) is framed in terms of an updated NDC target that "takes into account our status as a developing country, our national circumstances and common but differentiated responsibility and respective capability, and the long-term temperature goal, as specified in the Paris Agreement's Article 2, in the light of the latest science". The latter is elaborated by noting that the updated target range for 2030 lies within the 2°C fair share range, while the lower end is aligned with 1.5°C assessments, recognising different tools being available for such assessments.

Table 2: South Africa's emissions target range as expressed in the Updated First NDC

Year	Target	Corresponding period of implementation
2025	South Africa's annual GHG emissions will be in a range from 398–510 Mt CO ₂ e.	2021–2025
2030	South Africa's annual GHG emissions will be in a range from 350–420 Mt CO ₂ e.	2026–2030

It further notes that the period to 2030 is to be characterised by decarbonisation of the electricity sector and notes the need for implementation of the Integrated Resource Plan (IRP) 2019, reflecting on its, significant renewables investment requirements. Looking beyond 2030, it notes that "a deeper transition will take place in the electricity sector, coupled with a transition in the transport sector towards low emission vehicles; while the 2040s and beyond will be characterized by the decarbonization of the hard-to-mitigate sectors." The mitigation commitment finally notes the importance of pursuing decarbonisation in the context of the Just Transition.

Taking this position as a starting point, the PCC's recommendations for the 2030-2035 NDC update focuses on:

- Reflecting whether the 2030 target range as shown in **Error! Reference source not found.** is still appropriate and sufficiently ambitious in the light of what has happened both domestically and internationally since that target range was established.
- Making a proposal for an appropriate 2035 emissions trajectory range.
- Presenting reflections on appropriate sector-level mitigation considerations for inclusion.

A small number of modelling studies has been conducted that include quantitative long-term projections of emissions from the entire economy. When assessing these models' suitability for making recommendations on 2030 and 2035 targets, several requirements needed to be met. Firstly, the broad approach needed to be aligned with that taken in compiling the Updated First NDC. Secondly, they needed to give due consideration to South Africa's domestic climate policy commitments. Thirdly, the studies need to have considered scenarios with net zero dates, appropriate carbon budgets, and Paris Agreement / UAE Consensus temperature goals. Fourth, the underlying data needed to be accessible to the PCC, and finally, they needed to consider a sufficient number of scenarios to draw meaningful conclusions.

Only one study met all of these requirements, being that commissioned by the PCC from the Energy Systems Research Group (ESRG) at UCT in 2024³⁹ The study is further considered well suited to informing these recommendations as it includes recent data, and has been developed by a local well-respected research institution. Recognising, however, the need to contextualise the findings from the ESRG work, the model results are cross correlated with the latest data from two independent international analytical projects used previously in determining South Africa's NDC targets⁴⁰, the Climate Action Tracker (CAT) and the Climate Equity Reference Calculator (CERC), as well as data from studies by the National Business Initiative, the World Bank's Country Climate and Development Report, Cambridge Econometrics and South Africa's Just Energy Transition Investment Plan.

The ESRG modelling scenarios cover a mix of current sectoral policies and plans and decarbonisation policies (where relevant adjusted to reflect implementation realities), as well as possible additional decarbonisation policies going forward to give effect to South Africa's climate policy commitments, such as a higher carbon tax rate.

4.1. Framing South Africa's commitments in terms of carbon budget

A carbon budget represents the total volume of greenhouse gas emissions that the planet, a country or region can release over a defined timeframe while still ensuring that the planet remains within a particular temperature limit.

The ESRG work described previously draws on prior work that suggests that a fair share of the global carbon budget for South Africa might lie between 6 and 9 GtCO₂e between 2021 and 2050. This aligns with work by NBI which indicates a 7 to 9 GtCO₂e fair share range. Other modelling work done by ESRG in support of development of the Just Energy Transition Investment Plan (JET-IP) considers a budget range of 7.8 to 8.5 Gt CO₂e.

While not explicitly linked with a temperature goal, given that this work was done prior to the UAE Consensus, it might be assumed that these budget ranges are aligned with the temperature goal of the Paris agreement - of "holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C". As such it may be argued that the upper end of this budget is too high to be consistent with the UAE Consensus to which South Africa is a signatory, and that the country should rather target the lower end of the budget range. There are, however, no updated analyses to conclusively state what a 1.5°C aligned budget range might be. As such, the wider ESRG 6 to 9 GtCO₂e fair share budget range is retained in these recommendations.

In recognising South Africa's need to balance a global commitment to decarbonisation with development considerations, it is critical to also explore the implications of meeting a specific national carbon budget for the economy.

³⁹ PCC. 2025. *Net Zero CO₂ Emission Pathways for South Africa – Technical Report*. Presidential Climate Commission. https://pccommissionflo.imgix.net/uploads/images/Technical-Report_NetZero-Decarbonisation-Pathways-for-South-Africa.pdf

⁴⁰ Energy Systems Research Group (2021). South Africa's "fair share": mitigation targets in the updated first NDC in an international context.

The ESRG framework, similar to most energy and economic models, deals with the socio-economic implications of various scenarios by conflating these to the **narrow indicator of per-capita GDP**. Particularly in times of rapid change and uncertainty, GDP provides a limited account. A consideration of un-quantified upside socio-economic benefits and downside risks which are not modelled is crucial to obtain a more realistic comparison of the socio-economic implications of the different scenarios.

The higher ambition scenarios in the ESRG framework are accompanied with greater co-benefits and lower risks than those less ambitious. Benefits to higher ambition include air and water quality impacts and associated health issues linked to fossil fuels; increased access to markets based on perceived climate target ambition; new business opportunities in the transition; and access to concessional climate finance. Correspondingly, the less ambitious South Africa's climate ambition, the more the country will be subject to unilateral trade measures (border tax adjustments) on key exports; will face the risk of meeting a more stringent target later as a result of increasing international pressure in a rapidly warming world which would require a far more rapid and costly transition; and of being uncompetitive in the rapidly growing global green economy. Work done by Cambridge Econometrics also concurs that ambitious decarbonisation action has a positive impact for the economy, regardless of what the rest of the world does.

A comparison of GDP per capita across the ESRG scenarios reveals the following:

- There is **negligible benefit to per-capita GDP of a national carbon budget of more than 10 GtCO₂e** in pathways which reach net zero.
- Pathways with an 8 and 9 GtCO₂e budget do not perform quite as well on per-capita GDP as the 10 GtCO₂e scenario, although **still demonstrate per-capita GDP growth**.
- Given their relative impact, the balance of socio-economic co-benefits and risks discussed above could **eradicate or even reverse these GDP per capita differences** between the different carbon budget levels.
- The modelling provides insights into **the importance of policy**: With the right combination of policy and measures it is possible to increase the GDP per-capita 120% by 2055, reach net zero in 2050 and impose a long-term GHG budget of 8 Gt. A similar observation is made for pathways which reach net zero in 2050 or 2055 with a 9 GtCO₂e constraint.

Following on from these arguments, the PCC concludes that there is no justification for South Africa exceeding its fair share carbon budget. The remainder of this recommendations document works from this departure point.

4.2. Reflections on the 2030 target range

As indicated in Table 2, the Updated First NDC emissions range for 2030 is between 350 and 420 Mt CO₂e. Since that document was published, several external factors have impacted on South Africa's emissions trajectory which must be considered when reflecting whether this range is still appropriate. Factors which will have reduced emissions include the Covid-19 pandemic; extensive load-shedding; and low levels of economic activity and growth (which are partially as a result of the previous two factors). At the same time, while there have been delays in implementation of policy including the IRP, there is ongoing growth in on-grid renewable energy generation driven by the Renewable Energy Independent Power Producer Procurement (REIPPPP) program, as well as increased behind-the-meter solar PV capacity, which have brought down the emissions intensity of electricity supply. From a global perspective the world has since acknowledged the criticality of keeping the 1.5°C target within reach via the UAE Consensus, **suggesting**

a need for strengthened ambitions beyond the Paris Agreement within the context of which the 2030 targets were originally set.

³⁹The ESRG study provides data for modelled pathways with between 8 and 11 GtCO₂e emissions budgets and net zero targets. In line with the discussion presented in the previous section, however, only pathways that fall within the 8 to 9 GtCO₂e fair share national emissions budget range are considered further here to determine what a revised 2030 range might be in the light of increased ambition⁴¹. These pathways suggest that South Africa's 2030 fair share emissions could lie between 325 and 373 MtCO₂e. The latest CAT data⁴² suggests a 1.5°C fair share 2030 emissions level of 320 MtCO₂e, while the fair share values offered by CERC are between 309 and 329 MtCO₂e.⁴³ Together this data suggests that the Updated First NDC 2030 target range is higher than the country's fair share contribution towards the current international policy position of aiming for a maximum of 1.5 °C global average temperature increase.

Having said that, South Africa faces a variety of trade-offs when evaluating whether the 2030 targets should be revised downward or whether the country needs the additional emissions space for economic recovery and growth in the short to medium term. Recognising these trade-offs, the PCC suggests that:

- there is no analytical fair share justification in published literature for raising the 2030 target range;
- the NDC target for 2030 not be changed, while still acknowledging that South Africa should seek to achieve an emissions level which is well below the upper bound, to both align with South Africa's fair share contribution and to help position the country well for achieving the 2035 target affordably. However, the exponential growth in the renewable power sector needs to be pursued and the value of early investment in green power infrastructure thus be realised.
- keeping the 2030 target range unchanged should not limit the ambition for the 2035 emission range.

4.3. Proposal for the 2035 emissions range

In developing a proposal for a 2035 emissions range, the PCC recognises the divergence in opinions expressed during stakeholder consultations on how ambitious the NDC should be and that the ambition should consider the feasibility of implementation and implications for the economy. Notably, some labour and government representatives cautioned that the NDC target range should not exacerbate job losses, especially in vulnerable regions, and that too ambitious a target might exacerbate socio-economic inequality if not paired with clear mitigation support measures and policy certainty.

At the same time, the PCC notes that the range needs to reflect the international agreements contained in the UAE Consensus and Paris Agreement, including that the NDC should show progression in ambition compared to the Updated First NDC and should keep the 1.5°C within reach. It also needs to consider the outcomes of the Global Stocktake, which finds that the world is not on track to remain within the Paris

⁴¹ This subset consisted of a total of 19 pathways, each with different assumptions of economic growth rates, carbon taxes, energy efficiency and extent of localisation.

⁴² <https://climateactiontracker.org/countries/south-africa/>

⁴³ The figures quote from CERC are for the Low Energy Demand and Standard 1.5°C aligned pathways respectively. Note that CERC allows for a number of input parameters to be changed which will provide different emissions outcomes.

temperature targets. The Paris Agreement architecture under which the NDC is developed relies on developed countries supporting developing country mitigation efforts through financial, technical and capacity building assistance. Historically, this assistance has not been forthcoming to the agreed extent. The range should reflect this tension, with the top of the range being achievable and aligned to South Africa's own socio-economic interests in the absence of support, with achievement of the lower bound of the range being dependent on the extent to which this support is forthcoming going forward.

In line with the discussions presented in Sections 4.1 and 4.2, modelled pathways including an 8 and 9 GtCO₂e budget are used to inform the proposed 2035 range. These pathways indicate a **2035 emissions range of between 248 and 329 MtCO₂e in 2035**, depending on the pathway. **This range is recommended by the PCC for inclusion in the 2030-2035 NDC update**. As stated previously, while it is recognised that this range is obtained from a single study, it is aligned with findings from other relevant work. The NBI's net zero study⁴⁰ suggests a level of 310 MtCO₂e for 2035. Interpolation between the latest 2030 and 2050 data from Climate Action Tracker (CAT)⁴⁴ suggests a 1.5°C fair share aligned target of 291 MtCO₂e for 2035, while the Climate Equity Reference Calculator (CERC)Error! Bookmark not defined. suggests emissions of 306 MtCO₂e and 320 MtCO₂e for two different scenarios.

The data points that underpin the PCC's suggestions for both the 2030 and 2035 ranges are illustrated in **Figure 2**.

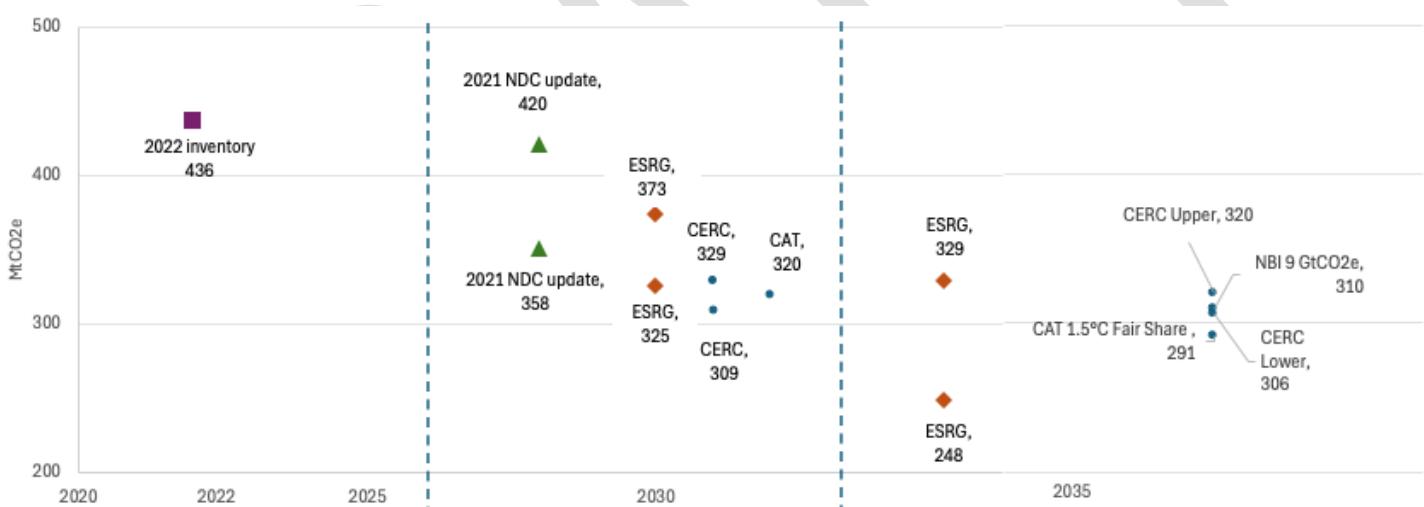


Figure 2: Data points used in developing the PCC emissions range proposals

The recommended budget range represents an ambitious target for South Africa, with the upper bound considered by the PCC to be in the best economic interests of the country, and the lower bound demonstrating ambition should the requisite international support be forthcoming. At the same time, the PCC recognises that there are several risks to both meeting the 2035 target and increasing ambition in future NDC submissions. These risks relate mainly to creating a coherent and supportive policy environment, building the capacity to implement such policies, and securing adequate climate finance flows. Most of these factors are within South Africa's control, apart from access to international climate finance I.

⁴⁴ <https://climateactiontracker.org/countries/south-africa/>

Given that the majority of the emissions reductions between now and 2035 will be achieved in the electricity sector, these risks largely relate to the transformation of this sector. Policy and regulatory certainty in the power sector and the creation of an enabling environment for investment is critical to unlock the required investment in the sector, including in renewables and batteries. The transition also needs to be supported by a timely and effective market reform process, including ensuring that contracting arrangements with Eskom do not lock the country into high utilisation of existing coal and gas (see also the discussion in Section 4.4.1). A further risk here is that the expansion and maintenance of transmission and distribution grid is inadequate to support the transformation of the sector.

Looking beyond the power sector, as per the discussion below, a further risk to ambition in future NDCs is that the necessary enabling conditions for the transition of hard to abate sectors (where large-scale emissions reductions may only occur post-2035) are not realised during this NDC period.

4.4. Recommendations for inclusion of sectoral considerations

The recommendations now turn to sectoral considerations to remain within the overall emissions ranges for 2030 and 2035.

4.4.1. Electricity supply

The electricity sector is well positioned to offer the greatest potential for early decarbonisation while providing low-cost electricity supply with a host of co-benefits beyond mitigation, including local air pollution reduction, protection of water resources and enabling economy-wide decarbonisation due to electricity being an input to most economic activity. This is widely demonstrated through local and global models and is largely linked to the rapid decline in the cost of renewable energy technologies over the past two or more decades, and more recently the decline in battery prices. Other options for decarbonisation of the grid can be controversial, with stakeholders consulted in this work having differing views on the inclusion of technologies such as natural gas and nuclear energy. Some stakeholders endorsed these options as contributing to a reliable energy mix, while others opposed these based on cost, safety, waste management, and procedural justice. Cost-optimising South African power sector studies include limited gas usage going forward, but no nuclear on cost grounds⁴⁵.

The modelling by the ESRG which underpins the recommended NDC emissions range, together with work by Meridian Economics⁴⁶ and the proposed build plan contained in the draft of the IRP 2024 submitted to NEDLAC were analysed by the PCC to reflect on a suitable NDC recommendation for the electricity supply sector. This assessment found that the renewables and battery build plans as included in the draft IRP 2024 falls within the range of figures suggested by both ESRG and Meridian as enabling the achievement of the proposed 2030 and 2035 target ranges. As such, the **PCC would support inclusion of renewables and battery capacity expansion numbers in the order of those contained within the draft of the IRP 2024 submitted to NEDLAC**, but at the same time recognising that technologies do not exist in isolation of the

⁴⁵ Meridian Economics, 2025, Review of the 2023 Integrated Resource Plan; PCC. 2025. *Net Zero CO2 Emission Pathways for South Africa – Technical Report*. Presidential Climate Commission.

https://pcccommissionflo.imgix.net/uploads/images/Technical-Report_NetZero-Decarbonisation-Pathways-for-South-Africa.pdf; Meridian-CSIR (2020) A vital ambition: determining the cost of additional CO2 emissions mitigation in the South African power sector. <https://meridianeconomics.co.za/wp-content/uploads/2020/07/Ambition.pdf>

⁴⁶ Meridian Economics, 2025, Review of the 2023 Integrated Resource Plan

broader energy system in which they operate. Ambitious build-out of renewables will also help to leverage the strong benefits to the economy of localisation of equipment manufacture.

Power sector emissions are, however, ultimately determined by fossil fuel combustion. Fuel combustion is in turn determined by both how much coal and gas capacity there is in the system, and how much it is used. For gas, technology choice also plays a critical role. Combined Cycle Gas Turbines (CCGT) require significantly higher utilisation levels to operate economically than that of the alternative Open Cycle Gas Turbine (OCGT) which is designed as a peaking plant. Whilst gas has lower combustion emissions than both the coal and diesel currently used in the power system, substantial gas use is ultimately incompatible with the country's long-term net zero target. In addition, gas represents significant pricing and supply use uncertainties and risks for power generation in the South African context.

Total new gas capacity build in the IRP before NEDLAC is at the higher end of what is indicated by the ESRG modelling up to 2035. The IRP suggests CCGT as the preferred technology choice for much of this capacity, which is aligned with recent statements by the Minister. Neither the IRP nor ESRG modelling provide gas utilisation rates, and the ESRG modelling does not indicate a technology preference. Given this limited information it is not possible to conclusively state the extent to which the IRP gas technology choice and utilisation is aligned with the recommended NDC emissions range for 2035. Having said that, the existing evidence suggests a strong possibility that the building and operation of gas facilities under the IRP will result in an exceedance of the proposed NDC targets.

Turning to coal, while no new coal is built under the IRP, the ESRG modelling reflects a somewhat more rapid decommissioning plan for coal fired power stations than is reflected in either Eskom's capacity planning⁴⁷ or the IRP. Furthermore, the ESRG modelling shows a wide range of coal utilisation rates depending on the scenario assumptions, with the highest being 52%. Eskom is indicating a long-term energy availability factor goal of 70%, which is aligned with the IRP figure of 69% for 2035. A combination of higher installed capacity and utilisation rates will likely result in emissions from coal being higher under the IRP than across the range of NDC target range aligned pathways.

The more emissions space taken up by the power sector, the less emissions space is available to the remainder of the economy to remain within the proposed NDC pathway range. This will have implications for the affordability of South Africa's decarbonisation path. Power sector emissions and investment in emitting generation infrastructure represent a critical risk to South Africa's achieving its NDC and LEDs commitments. **The PCC therefore recommends urgent analysis of the proposed gas build and utilisation and coal decommissioning and utilisation, and hence corresponding emissions levels being implied by the current IRP, including to establish an emissions envelope for the power sector aligned with the proposed NDC target range.** The electricity build-out needs to be **supported by expansion and upgrading of transmission infrastructure, support for which could also be included in the NDC.**

4.4.2. Transport

The transport sector is the second highest source of emissions in South Africa, and the Department of Transport has produced a Draft Just Transport Transition Plan to decarbonise to reach net zero emissions for land transport, in a just and inclusive way. The Plan considers interventions that span three time periods, being 2025 - 2030, 2030 - 2035, and 2035 – 2050. The first two periods of which fall within the period covered by the 2030-2035 NDC update. While the Plan does not provide modelled data on which to base sector-wide emissions targets, it does set a number of ambitious targets for individual actions,

⁴⁷ <https://www.climatecommission.org.za/events/18th-meeting-of-the-presidential-climate-commission>

including the key decarbonisation levers considered in the ESRG modelling, being electrification of the passenger and freight transport fleet and a shift to freight rail.

The PCC recommends that the NDC includes a **formal commitment to implementation of the Plan towards ensuring international accountability** and financial support. Further modelling and analysis is recommended to determine the overall contribution of implementation of the Plan to achieve the national emissions targets range.

4.4.3. Industry

Industrial sectors including steel, cement, and ferroalloys play a critical role in industrialisation and global decarbonisation but are also significant sources of emissions. While opportunities for some emissions savings in industry are possible by 2035 through increased efficiencies, changes to existing process configurations and feedstock changes, the large-scale decarbonisation of these industries may only be possible after this date. As such, it is recommended that this NDC include a **commitment to laying the groundwork for large-scale industrial decarbonisation**, by continuing to monitor the evolution of step change options such as green hydrogen and carbon capture and storage and supporting companies in beginning to lay the groundwork for investment in promising technologies. This will require international support. This groundwork will support the setting ambitious decarbonisation targets in later revisions of the NDC.

5. Means of Implementation

‘Means of Implementation’ (MOI) in the UNFCCC and Paris Agreement context is the integrated package of financial, technological, and capacity-building support necessary for countries to implement climate change mitigation and adaptation effectively. MOI includes an emphasis on equity and differentiated responsibilities between developed and developing countries. The status of South Africa’s MOI is well documented in its inaugural First Biennial Transparency Report to the UNFCCC, published in 2024.

South Africa faces a constrained fiscal environment, low investor confidence, and multiple competing priorities across its development agenda. Implementation of the country’s climate response in this context is a significant challenge, and one which South Africa must well understand, plan for, and prioritise. Current MOI limitations include insufficient adaptation finance and no adaptation institutional centre, underdevelopment of project pipelines, lack of mechanisms for community ownership models and cooperatives, foreign exchange risk and a lack of financial de-risking mechanisms, no interim implementation milestones and progress tracking, and poor climate finance co-ordination and delivery prioritisation.

As a result, whilst the PCC recommends an ambitious mitigation target range, it simultaneously **emphasises the need for the international support for developing countries integral to the Paris Agreement to implement this range, particularly the lower bounds, and to adapt to the outsized climate impacts the country will experience** due to both historical greenhouse gas emissions and to ongoing insufficient mitigation action globally. It is noted that historically this assistance has not been forthcoming to the agreed extent, which will impact South Africa’s ability to achieve its target range.

Based on its stakeholder engagement and technical analysis, the PCC makes a number of recommendations for inclusion in the country’s 2030-35 NDC, grouped under broad categories:

5.1. South Africa’s NDC implementation must enhance justice and economic diversification

Enhancing justice is a cross-cutting element of the country’s NDC. As such, the PCC highlights that **implementation support should be structured in a way that enhances justice and be designed to ensure that climate response does not replicate or deepen past injustices**. This is especially so for the coal-dependent region of Mpumalanga. In particular, climate response interventions should include those tailored to the unique needs and capabilities of local communities, promoting community-based enterprises and cooperative models especially in sectors such as energy, agriculture, and waste, and supporting SMMEs with access to climate finance, sites, inputs, market linkages, and skills development.

South Africa has a coal-dependent economy, the structure of which will need to transition to align with and thrive in a net zero future. It is recommended that the implementation of the NDC should therefore emphasise economic diversification including through the **localisation of appropriate climate technologies and strengthening of domestic value chains in electric mobility, green manufacturing, and renewable energy**, amongst others.

5.2. Adaptation needs to be an implementation priority

Adaptation remains insufficiently prioritised at both national and subnational levels, leading to persistent vulnerabilities, especially within rural and climate-exposed municipalities. Despite adaptation's prominence in national climate policy, adaptation initiatives received less than 20% of tracked climate finance between 2020 and 2022⁴⁸. Key sectors such as water resource management, climate-smart agriculture, and disaster risk reduction continue to face significant funding shortfalls despite their high exposure to climate risk.

In response, the PCC is developing an overarching Just Adaptation and Resilience Investment Platform, providing the basis for investments made by the Climate Response Fund⁴⁹. The need for **the establishment of a dedicated adaptation finance facility within existing climate finance mechanisms should be highlighted in the NDC**, designed specifically to attract and blend domestic public funds, international concessional resources, and private investment into adaptation and resilience projects.

5.3. Climate finance flows and support need to be increased

South Africa's Updated First NDC identified that annual financial support rising to USD 8 billion by 2030 would be required for the country to meet its mitigation and adaptation commitments. Subsequent to the publication of the NDC, the Just Energy Transition Partnership (JETP) Investment Plan estimated that South Africa's Just Energy Transition requires ZAR 1,5 trillion⁵⁰ (USD 83 billion) in investment over the period 2023-27. At the time of writing, South Africa has been pledged USD 12.8 billion (or 15% of the total JETP-IP investment requirement)⁵¹, 46% of which is concessional, and 6% grant funding. The remaining 50% is primarily made up of commercial loans and other financial instruments such as guarantees and blended finance. Adaptation investment requirements indicated in the NDC are expressed as a very large range, with the upper end just short of USD 380 billion between 2021 and 2030. The First Biennial Transparency Report indicates that USD 828 million of climate finance was received over the two-year period 2021 – 2022. The PCC estimates a need for approximately ZAR 2 trillion in adaptation and resilience funding by 2050⁵² and over ZAR 4 trillion to decarbonise South Africa's energy system⁵³.

There is limited publicly available information that can be drawn upon to establish the specific finance needs between 2025 and 2035. Despite this lack of available information, stakeholders consulted as part

⁴⁸ CPI, 2023. The South African Climate Finance Landscape 2023. Available at: <https://www.climatecommission.org.za/publications/the-south-african-climate-finance-landscape-2023>

⁴⁹ PCC, 2024. Presidential Climate Commission Annual Review. Available at: <https://theethicalagency.co.za/wp-content/uploads/2024/04/PCC-Annual-Report-Design.pdf>

⁵⁰ JETP BMU, 2023. Investment Plan.

⁵¹ Just Energy Transition Grants Register 2025, Quarter 1.

⁵² PCC, 2024. *Just Transition Financing Mechanism Recommendations Report*, Presidential Climate Commission, Johannesburg.

⁵³ PCC, 2023. *Technical Report Supporting the Recommendations for South Africa's Electricity System*, Presidential Climate Commission, Johannesburg

of the process of developing these recommendations expressed broad consensus that both mitigation and adaptation responses remain underfunded.

These observations lead to a PCC recommendation that South Africa needs **an expansion to flows of climate finance for both mitigation and adaptation, and including both private and public, domestic and international funding sources**. It is also recommended that DFFE **undertake a comprehensive assessment to inform the quantum of finance support needs included in the MOI section of the NDC**.

While not yet fully embedded in national planning, financing for loss and damage is an emerging imperative. The PCC recommends that the NDC highlights **the need for institutional and financing mechanisms to be expanded to include provisions for supporting communities and municipalities experiencing unavoidable climate impacts**.

To ensure that the flow of finance is sufficient and structured in a way that optimally supports South Africa's transition, the NDC should **call for a reform to the international financial architecture to ensure that is fit for purpose in the era of climate crisis**. This includes more equitable governance of multilateral institutions, enhanced access to concessional finance, and debt restructuring that allows developing countries to invest in their own transitions. Furthermore, given the volatility of exchange rates and reliance on foreign-denominated concessional finance, the embedding of dedicated financial instruments to mitigate foreign exchange risk in climate finance instruments will be essential to improve the viability of local implementers and to attract sustained international investment.

5.4. South Africa's climate finance environment should be broad, flexible, innovative, strategic and principles-based

Different stakeholder groups favoured different types of climate finance - civil society, labour, and the gender advisory group favoured grants and public finance to protect vulnerable groups from indebtedness, whilst business supported blended finance, private capital mobilisation, and market-based approaches. However mobilising finance at scale to support South Africa's adaptation and mitigation objectives will require a diverse and innovative mix of finance sources and mechanisms, including public grants, market-driven instruments, public-private partnerships, and enabling policy frameworks.

The updated NDC should therefore support a broad-based enabling environment that encourages experimentation, de-risks early-stage investment, and strengthens domestic ecosystems for climate innovation. This environment should include supporting platforms that catalyse green enterprise development, promote localisation of clean technology, and unlock new forms of blended finance. Mechanisms such as results-based finance, climate venture funds, insurance schemes, and aggregated procurement models can help address market failures and bring forward investment in resilience and low-carbon transitions. Domestic and international carbon markets may offer an additional avenue for mobilising finance, particularly when aligned with transparent regulatory frameworks and international mechanisms such as Article 6 and CORSIA.

By embedding an innovative financing agenda within a flexible, principles-based framework, South Africa can retain strategic optionality while fostering the enabling conditions for investment, localisation, and inclusive growth. Given the limited pool of concessional finance and grant funding available globally and in South Africa, it is important that the country should be strategic in where, when and how this finance is deployed. Concessional finance can leverage additional private sector investment, reduce risk, and fill gaps in sectors where market returns are limited, such as adaptation and resilience-building projects.

The PCC has proposed a 'Just Transition Financing Mechanism (JTFM)⁵⁴', highlighting the importance of overcoming barriers to financing a just transition. The JTFM focuses on mobilising and allocating financial resources to support socially inclusive and equitable climate transition projects in South Africa. Its activities are designed to overcome systemic and project-specific barriers that inhibit the flow of finance to just transition projects.

5.5. Climate finance absorptive capacity must be strengthened

While substantial volumes of international climate finance exist, South Africa's readiness to channel these resources toward impactful and scalable climate programmes remains uneven, particularly at the subnational level. **Key to the successful implementation of South Africa's updated NDC is the ability to absorb, deploy, and track climate finance effectively, commonly referred to as absorptive capacity. This must be highlighted.**

Building absorptive capacity requires a multi-dimensional approach. This includes institutional reforms, enhanced planning and budgeting systems, strong project pipelines, and a skilled and capable workforce at all levels of government. **Targeted technical assistance, feasibility assessments, and advisory support from the international community will be required, the need for which should be included in the NDC.** The Climate Capacity Diagnosis and Development (CaDD) tool offers a structured methodology to identify gaps and inform targeted technical assistance. Building on this, a system-wide, coordinated mechanism to align efforts, pool resources, ensure strategic deployment of concessional funding, and create visibility for funders and delivery agents alike is required.

Country platforms present a critical opportunity to meet this need. By design, they provide a nationally owned, multi-stakeholder coordination mechanism that can align priorities across government, development partners, the private sector, and civil society. A well-structured country platform can help prioritise investments, match them with appropriate funding sources (grants, concessional loans, guarantees), and streamline the flow of finance to credible, ready-to-implement projects, particularly in areas like adaptation, resilience, and the just transition.

For South Africa, including provision for a country platform that is aligned to the Climate Change Act and Just Transition Framework in the NDC architecture can help build the institutional muscle necessary to scale implementation. A country platform can support the operationalisation of domestic instruments like the Just Transition Financing Mechanism (JTFM) and the Just Adaptation and Resilience Investment Platform (JARIP), enhance coordination across national financial entities such as the DBSA, IDC, and National Treasury, as well as with private financial institutions, while also providing a clear entry point for engaging with global funding instruments such as the Green Climate Fund, Article 6 mechanisms, and the Loss and Damage Fund. Ultimately, a country platform can serve not only as a financial conduit, but as a governance innovation that strengthens South Africa's ability to deliver on its climate commitments. By improving absorptive capacity, the full potential of climate finance to drive equitable, resilient, and transformative development can be unlocked.

⁵⁴ PCC, 2024. The Presidential Climate Commission's Recommendations on a Just Transition Financing Mechanism,

5.6. Local government needs to be empowered and supported

There was consensus across stakeholder groups consulted during development of these recommendations that without empowering local government, NDC targets will not be realised. Local government stakeholders emphasised that municipalities are on the front lines of climate response implementation but face substantial barriers, including unfunded mandates, misaligned policies, weak project preparation support and capacity gaps. Municipalities, particularly in rural and climate-vulnerable areas, struggle to access funding, which needs to be paired with technical assistance and embedded advisory support to ensure it is effectively used. National Treasury's ongoing reforms to the local government fiscal framework to improve financial sustainability and incentivise climate-aligned service delivery at the municipal level are imperative.

The PCC therefore recommends that the role and needs of local government are specified in the NDC.

5.7. Monitoring, evaluation and accountability must be improved

South Africa is working to align with the requirements of the Enhanced Transparency Framework (ETF) under the Paris Agreement. Whilst foundational elements of supportive monitoring and evaluation (M&E) exist, these are not yet coordinated into a comprehensive system that links directly to implementation enablers. Importantly, **it is recommended that the NDC commit to developing indicators that are linked to the justice objective of the NDC, such as equity, participation, and vulnerability reduction.** South Africa's existing M&E systems – including the Annual Performance Plans and the Medium-Term Strategic Framework – offer institutional platforms where both just transition and climate indicators such as resilience outcomes, and economic diversification progress can be embedded.

The PCC recommends that **South Africa commits in its NDC to establishing a dashboard for comprehensively tracking implementation – including finance flows, capability development, and sectoral transitions.** This should be published annually to enhance transparency, build trust, and enable adaptive management. The dashboard should include clearly formalised interim milestones and an integrated, publicly accessible tool for tracking implementation progress.

7. Summary

The PCC recommends that South Africa's 2030–2035 NDC should mark a decisive shift – from a climate commitment framed primarily in terms of international compliance, to one that is explicitly positioned as a national development instrument. The principles of the just transition, distributive, procedural, and restorative justice should be embedded throughout.

7.1. An Inclusive and Policy-aligned NDC Process

The development of South Africa's NDC must be a comprehensive, interdepartmental, and consultative process. Effective climate action requires that all government departments and sector-specific line departments. The policy alignment among the LEDS, NDCs, SETS, and the NDP2030 should be strengthened, ensuring **coherence across national economic, social, and environmental priorities, underpinned by the Just Transition Framework**.

7.2. Systemic Reform to Enhance Resilience and Adaptation

In summary, the PCC recommends the following with respect to Adaptation and Resilience in the 2030–2035 NDC update:

- Adopt the Anticipate–Adapt–Recover framework to guide systemic adaptation planning and implementation, as set out in the Climate Change Act and forthcoming National Adaptation Strategy and Plan.
- Integrate adaptation across all government departments and spheres. Adaptation indicators should be embedded into the Medium-Term Strategic Framework to guide fiscal allocations, and reforms should extend to national budgeting processes.
- Enhance local government capacity and effective use of the CCRF and JTFM for successful adaptation support and implementation.
- Climate-risk and vulnerability assessments under the Climate Change Act should be prioritised. This should be supported by promoting an adaptation-investment ecosystem.
- Deepen regional collaboration to collectively address climate risks and realise efficiencies of scale.
- A more coordinated approach to disaster response and recovery must be adopted, integrating real-time climate data, early-warning systems, contingency financing, and rapid-deployment capability, thereby effectively bridging current gaps between risk assessment, emergency relief, and long-term resilience.
- A Theory of Change approach should be embedded in national and sectoral adaptation strategies. This will allow tracking of equity-enhancing outcomes and facilitate transparent monitoring, evaluation, and learning.
- Development of an annual Adaptation Dashboard with disaggregated indicators is also recommended.

7.3. Mitigation ambition and enabling considerations

In summary, the PCC recommends the following with respect to Mitigation in the 2030–2035 NDC update:

- The 2030 target range should not be altered. Further, the DFFE could seriously consider lowering the range to align with South Africa's fair share contribution to 1.5 C and to encourage the acceleration of power sector decarbonisation.
- A 2035 emissions range of between 248 and 329 MtCO₂e for 2035. This represents the bounds of the ESRG fair share compatible scenarios, and encapsulates the 1.5°C fair share aligned scenarios from credible international reference sources.
- Supporting the renewables and battery expansion capacity projections to 2035 contained in the draft IRP submitted to NEDLAC, and facilitated by expansion and upgrading of the national grid.
- Establishment of guardrails for the utilisation of coal and gas in the power sector to support the achievement of the NDC target range in an affordable manner that promotes economic diversification and justice.
- Emission reductions in other sectors are aligned with the NDC emissions target ranges, as well as laying the foundation in terms of investment and planning to ensure their contribution to the net zero trajectory in the period post-2035. Notable here are the transport and industry sectors.
- A just net-zero pathway will require proactive, scaled-up economic diversification strategies, particularly in the most vulnerable and carbon-intense regions and sectors. Diversification efforts should include creating new economic clusters and sectoral value chains.

7.4. Means of Implementation

In summary, the PCC recommends the following with respect to Means of Implementation in the 2030-2035 NDC update:

- International finance flows and support will be required to implement the proposed NDC emissions target ranges for 2030 and 2035, and particularly to adapt to the outsized climate impacts the country will experience. A comprehensive assessment should be undertaken for the NDC to inform the quantum of finance required.
- The NDC should call for reform to the international financial architecture to ensure that is fit for purpose in the era of climate crisis.
- South Africa's NDC implementation support should be structured in a way that enhances justice, and be designed to ensure that climate response does not replicate or deepen past injustices.
- Implementation support should promote economic diversification, such as localisation of appropriate climate technologies and strengthening of domestic value chains in sectors such as electric mobility, green manufacturing, and renewable energy.
- Adaptation needs to be highlighted as an implementation priority in the NDC, including the establishment of a dedicated adaptation finance facility within existing climate finance mechanisms.
- The NDC should highlight loss and damage impacts and the need for institutional and financing mechanisms to include provisions for supporting communities and municipalities experiencing unavoidable climate impacts.
- South Africa's climate finance enabling environment should be broad, flexible, innovative, strategic and principles based. The NDC's delivery architecture should be embedded within a country platform that is aligned to the Climate Change Act and Just Transition Framework to help build the institutional muscle necessary to scale implementation.
- The NDC should highlight that the ability to absorb, deploy, and track climate finance effectively is key to its effective implementation, and that targeted technical assistance, feasibility assessments, and advisory support will be required from the international community.

- The role and needs of local government should be specified in the NDC.
- The NDC should note that MOI monitoring, evaluation and accountability needs to be improved and should commit to developing of indicators linked to the justice objective of the NDC, such as equity, participation, and vulnerability reduction. The NDC should further commit to establishing a dashboard for comprehensively tracking implementation, including finance flows, capability development, and sectoral transitions, should be established.

