



African Perspectives on Transformational Adaptation for Just and Scalable Adaptation Under the South African G20 Presidency

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Introduction

In 2024, at the G20 Summit in Rio de Janeiro, world leaders reaffirmed their commitment¹ to sustainable development and the Paris Agreement by placing emphasis on the need for “*urgent, incremental, transformational and country-driven adaptation action based on different national circumstances and for the enhancement of adaptation efforts,*” in line with Article 2.1(b) of the Paris Agreement² and the outcomes of the first Global Stocktake.³ This signals a positive shift in global adaptation discourse, recognising that addressing the root causes of vulnerability requires more than short-term responses but demands long-term changes. The G20’s call for urgent action to scale up, prioritise and mainstream whole-of-society and economy-wide adaptation that aligns with Africa’s climate reality and development needs.

Africa is disproportionately affected by climate change. The continent is warming faster than the global average, facing prolonged and severe droughts, floods, heatwaves, and disruption of livelihoods. Yet, the continent remains under-resourced in adaptation finance and constrained by systemic development challenges. The Intergovernmental Panel on Climate Change (IPCC) Working Group II reported that adaptation efforts in many developing countries, especially in Africa are fragmented, incremental, not scalable and largely ineffective.⁴ Such efforts are mostly designed to respond to current impacts or near-term risks and focus more on planning rather than implementation. This raises the question on what is the best way to design effective and sustainable adaptation approaches?

In response, the scientific community calls for moving from incremental to more transformational adaptation strategies. The IPCC defines incremental adaptation as actions where the central aim is to maintain the essence and integrity of a system or process at a given site. In contrast, transformational adaptation changes the fundamental attributes of a system, including altering goals or values and addressing the root causes of vulnerability which may include adoption of practices at large scale and may be new to a particular region.⁵ While both approaches are part of a continuum, transformational adaptation is a relatively new concept and less implemented in practice with few examples of large scale success to date.

Although transformational adaptation has been discussed in various forums under the United Nations Framework Convention on Climate Change (UNFCCC) process, such as the Glasgow Sharm-el-Sheikh Work Programme, National Adaptation Plans (NAPs), and the work of the Adaptation Committee, its application remains limited. These forums have focused on how to incorporate transformational adaptation into national plans and strategies, and how to build national capacity for adaptation action. Nevertheless, more is needed to embed transformational adaptation within both global and domestic adaptation frameworks.

South Africa’s G20 presidency presents a strategic opportunity to advance the discussion on transformational adaptation in Africa and beyond by deepening understanding of transformational adaptation, explore its relevance for Africa, and outline how the G20 can support transformational adaptation that delivers good promise for Africa climate resilience.

¹G20 Rio de Janeiro Leaders’ Declaration <https://g20.org/wp-content/uploads/2024/11/G20-Rio-de-Janeiro-Leaders-Declaration-EN.pdf>

²Article 2.1. Paris Agreement: https://unfccc.int/sites/default/files/resource/parisagreement_publication.pdf

³ Outcome of the First Global Stocktake Decision-/CMA5: https://unfccc.int/sites/default/files/resource/cma5_auv_4_gst.pdf

⁴ H.-O. Pörtner, et.al.,: [Summary for Policymakers](#), IPCC, (2022)

⁵ IPCC, 2022: Climate Change 2022: https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FullReport.pdf; *Defining and understanding transformational adaptation at different spatial scales and sectors, and assessing progress in planning and implementing transformational adaptation approaches at the global level.* (n.d.).

How should transformational adaptation be understood?

The call for transformational adaptation in addressing climate change emerged out of the recognition that climate change already had significant negative impacts on the society across the globe. The detrimental impacts are amplifying inequalities and vulnerabilities which include underlying impacts affecting efforts to achieve Sustainable Development Goals (SDGs), especially poverty, injustice, economic participation, and uneven access to education.⁶

How transformational adaptation is distinguished from incremental adaptation and no adaptation⁷:

- No adaptation refers to maintaining the status quo, proceeding with a 'business-as-usual' approach to development with no concern for the historical climate
- Incremental adaptation is a measure to address immediate climate impacts with the intention of avoiding or reducing losses and damages within the current structure and functioning of a system
- Transformational adaptation signals a change from the status quo, placing emphasis on changing the underlying root causes of vulnerability

Limit to Adaptation Thresholds

Severe climate change threatens to overwhelm even robust human-environment systems. Transformational adaptation is required in cases where impacts are resulting in crossing the thresholds beyond which existing systems can no longer be sustained. These thresholds will depend on the resilience of systems and activities. A more resilient system should be able to accommodate a higher rate and magnitude of climatic or environmental change than a less resilient. Interventions to increase resilience therefore may change the value of a viability threshold, such as in a specific climatic variable or set of variables. Such interventions might focus on enabling people to recover more quickly from a shock by enabling a system to accommodate a greater amount of change or variation.

Viability thresholds can therefore be understood through the "coping range" concept, the range of conditions that a system can accommodate without significant or lasting disruption, bounded by critical thresholds beyond which the system is compromised (Figure 1). A practical definition of resilience is the extent to which a system provides sufficient, and sufficiently consistent resources or services for the dependence to be viable.

Fundamental aspects of the system that are expected to change during such transformations include norms and values, governing rules, law or customs, and the flow and distribution of power and resources. Given the distinction between incremental and transformational adaptation, it is worth noting that the two concepts are interconnected and interdependent, and form part of a continuous process. In some

⁶ Bel G, Teixido JJ [The political economy of the Paris Agreement: income inequality and climate policy](#). (2020)

⁷ Taylor A, McClure A, Van Rooyen L et al. [Pathways to transformative climate adaptation in southern African cities](#). Accessed 2025-08-05

settings, incremental adaptation will be sufficient while in others, transformational adaptation is necessary. For example, as *climate-driven droughts deepen, farmers in Limpopo are shifting from cattle to more drought resilient goats. This structural livelihood change reflects a redefinition of traditional wealth systems, shifting towards climate-smart options better suited to changing conditions, and reshaping local cultural and economic ecosystems.*⁸

Challenges with Transformational Adaptation in Africa

1. **Lack of clarity and consensus on definition and metrics of transformational adaptation:** A central challenge is the lack of consensus around the metrics for transformational adaptation, especially marking its difference from incremental adaptation. This ambiguity creates difficulty in designing, funding, and monitoring transformational interventions which can lead to misapplication or tokenistic use of the term in policies and projects.
2. **Limited access to adaptation finance:** Most African countries continue to rely on multilateral climate funds such as the Green Climate Fund (GCF) and the Adaptation Fund, characterized by bureaucratic processes and restrictive eligibility criteria. Meanwhile, private sector investment in transformational adaptation remains negligible due to perceived risks, unclear returns, and high upfront costs. Without predictable, grant-based, and flexible finance mechanisms, many African states are unable to take the long-term, structural decisions required for transformation pathways.
3. **Weak legal and institutional frameworks:** Few countries have enacted national legislation that embedded adaptation obligations across government and sectors. Institutional mandates for climate action are often fragmented, poorly funded, or misaligned. Without cross-sectoral governance mechanisms, transformational shifts remain difficult to scale, especially in land use, urban development, or infrastructure.
4. **Risk of top-down and technocratic approaches:** Transformational adaptation has been criticized as a concept shaped by external actors and implemented in a top-down, donor-driven, and conditional manner without sufficient consideration of Africa's development contexts or historical injustices. For many vulnerable communities, transformational shifts such as livelihood transitions or new governance regimes may be perceived as externally imposed disruptions rather than necessary adaptation.
5. **High political and social transaction costs:** Transformational adaptation could be politically and socially disruptive, challenging established interests, restructuring national planning systems, or shifting economic pathways. In politically fragile contexts, these interventions carry risks of backlash, elite capture, community rejection, or loss of community trust. The capacity demands are very high because transformational adaptation requires sustained technical expertise, coordination across ministries, investment in data and climate modelling, and long-term policy commitment, which are often in low supply.
6. **Few documented case studies and limited learning platforms from Africa:** The lack of documented African case studies and monitoring tools is hampering the learning and scaling efforts on transformational adaptation. Without evidence of success and pathways for replication, policymakers may find it difficult to mobilise support for transformational adaptation in global forums or mobilize internal political support.

⁸ Kisford Kaoma [Goats Replace Cows in Southern Africa Amid Climate Change](#). Accessed: 2025-06-23

Recommendations for South Africa's G20 presidency

The South Africa G20 Presidency may exploit some opportunities to canvas for a modified approach to transformational adaptation that imbibes perspectives from developing economies.

The development of adaptation scenarios:

Transformational adaptation presents an opportunity for G20 countries to develop and refine their adaptation scenarios and outline suitable adaptation responses across sectors. These scenarios are informed by science and underlying socio-economic factors, providing context-specific response measures to adapt to climate change as well as informing climate change policy documents such as NAPs, Long Term Low Emission Development Strategies (LT-LEDS) and sectoral adaptation policies.⁹ The opportunity lies in the development of science to inform the methodologies for modelling adaptation scenarios which may be replicated across Africa, transforming the approach to designing and implementing adaptation actions.

⁹ Section 20 of the South African Climate Change Act, 2024

⁵ DEA (Department of Environmental Affairs), 2016. *Long Term Adaptation Scenarios for Africa*, Long-Term Adaptation Scenarios Flagship Research Programme. Pretoria pg. 5

⁶ *supra*, pg. 7-10

Case Study 1: Adaptation Scenarios in South Africa

In 2024, South Africa enacted its Climate Change Act which entrenched the use of adaptation scenarios in the development of its adaptation policies, such as its NAPs, sectoral adaptation plans, and other crucial climate change policy instruments. Section 20 of the South African Climate Change Act, 2024 mandates the Minister to develop adaptation scenarios that anticipate the likely impacts of climate change and the associated vulnerabilities over the long-, medium- and short-term. The adaptation scenarios were developed through extensive analytical work and a process of stakeholder consultation.⁵ By analysing three scenarios of a warmer and drier South Africa [with a temperature increase of $<3^{\circ}\text{C}$ and reduced rainfall]; a warmer and wetter South Africa [with a temperature increase of $<3^{\circ}\text{C}$ and increased rainfall]; and a hotter South Africa [with a temperature increase of $>3^{\circ}\text{C}$]. South Africa projects potential climate change risks, hazards and impacts.⁶ South Africa is able to propose response measures to adapt to identified potential risks and hazards from these projections to reduce the impacts of climate change.

The reality of climate change impacts is undoubtedly more complex than a simple projection scenario. For example, while hazards in one area would be increased precipitation, another region would experience reduced precipitation which calls for more granulated scenario modelling to optimize the adaptation scenarios. Adaptation scenarios provide evidence-based information to inform decision-making, institutional management, policy formulation and adaptation action, transforming the reactive nature of adaptation action to more proactive and anticipatory action.

- **Enactment of appropriate legal instruments:** Africa has few examples of climate change legislation (eight African countries have stand-alone climate change legislation),⁴ with most countries relying on environmental policies to respond to climate change and coordinate their responses. This legislative gap presents an opportunity for the G20 presidency to champion the development of climate change laws in Africa. Laws can be transformational by streamlining the coordination of adaptation actions, establishing institutions, imposing mandates, and providing support for climate financing. Climate change laws further entrench the development of adaptation policy such as NAPs and sectoral adaptation plans.
- **Unlocking climate finance in the continent:** The volume of concessional finance flowing towards adaptation has increased modestly in recent years. Analysis of the implementation status of the Nationally Determined Contributions (NDCs) from Africa reveals that most of the climate finance received are conditional, drawn from multilateral climate funds such as the GCF, the Adaptation Fund and Climate Investment Fund (CIF), and targeted towards mitigation. To enhance the capacity of African countries to finance their climate change actions, it is imperative to strengthen financing mechanisms in the continent. The G20 and Africa can unlock climate finance by promoting non-conventional sources of finance such as voluntary carbon markets, debt-for-climate swaps, payments for ecosystem services, and private sector financing to sustainably finance adaptation actions. In addition, a desirable approach to adaptation financing would be a demonstration of how the proposed adaptation actions would contribute to the country's transformation adaptation goals, a

model adopted by CIF and GCF. The use of fees and administrative fines to contribute to the “climate change pot” is another means of sustainable financing that may be scaled up.

Case Study 2: The climate change law in Kenya

Climate change laws play a crucial role in accounting for plans and responses. Climate change legislation establishes the institutional framework for the coordination of climate change actions while imposing duties and obligations in climate change responses, including adaptation. Climate change laws support climate finance mechanisms and the development of climate change response measures.

African countries are increasingly progressing towards enacting climate change legislation. The Kenyan Climate Change Act, 2016 (as amended in 2023) engages Parliamentarians in the oversight of government adaptation actions through the tabling of reports such as the State of Climate Report, fostering accountability through establishing Enhanced Transparency Framework. The Kenyan Climate Change Act mandates the Cabinet Secretary to cause the formulation of the National Climate Change Action Plan every five-years. The Act further entrenches rights in relation to climate change, such as the right to public participation, right to judicial recourse, right to access climate information and the consideration of Indigenous knowledge in relation to adaptation, thereby fostering meaningful public consultation, accountability and locally led climate action.

- **Development of Africa based framework for measuring transformational impact:** Africa needs to develop its own framework for measuring transformational impact, contextualized to reflect the continent's unique socio-ecological systems, governance realities, and development needs. This presents an opportunity to capture metrics of systemic change relevant to the African context, going beyond traditional metrics to capture systemic changes that promote long-term resilience but should reflect the voices of marginalized communities, Indigenous Knowledge Systems, and youth. Such a framework should integrate both qualitative and quantitative tools to track multidimensional progress in alignment with the Agenda 2063 and the Sustainable Development Goals (SDGs) to ensure coherence with broader development goals through regional collaboration in guiding Africa toward sustainable, inclusive, and climate-resilient development pathways.

Case Study 3: Framework by Climate Investment Fund¹⁰

The Climate Investment Fund (CIF) developed a programmatic framework for transformational climate action and evaluation for operationalizing country-driven transformational adaptation. CIF supports countries in developing investment plans with stakeholders and preparing adaptation plans using this framework. The CIF framework contains five dimensions of transformational adaptation, specifying that adaptation action must:

¹⁰ UNFCCC, [Defining and understanding transformational adaptation at different spatial scales and sectors, and assessing progress in planning and implementing transformational adaptation approaches at the global level](#) (2024) Accessed 2025-06-23

- Be relevant to the context and beneficiaries. Relevance is an action-oriented dimension that illuminates the ongoing, dynamic relationship between desired goals, context and opportunity. Change can be assessed for its relevance to or alignment with key goals and processes
- Lead to a systemic change, including fundamental shifts in the structures and functions of a system, interrelationships among core elements within and between systems, and changing power dynamics
- Accelerate the speed of change to leverage windows of opportunity while ensuring a just transition.
- Be scalable along different dimensions such as levels, policies, people, geography, levels of understanding and the public–private continuum
- Be sustainable, involving no backsliding and focus on integrating multiple stakeholders. This dimension emphasizes the importance of robustness and resilience for sustainability, and adaptability in the face of change

Conclusion

Transformational adaptation presents a vital opportunity for African countries to shift from short-term climate responses to long-term approaches that address the root causes of climate vulnerability and attain climate-resilient development that is equitable, socially transformational, and specific to local contexts in alignment with global goals. To accelerate just and scalable adaptation in Africa, transformational adaptation must therefore prioritize adaptation pathways to reshape development trajectories, strengthening institutions, and empowering communities to build long-term resilience. As the G20 Summit deliberates on development challenges and their relation to climate adaptation priorities, it should be recognized that African countries must be empowered to design and implement context-specific, long-term solutions that address the structural drivers of vulnerability. This requires not only increased and predictable means of implementation such as finance, technology, capacity-building and inclusive governance but also the development of robust legal mandates, policy, and institutional frameworks that can drive systemic change.

RECOMMENDATIONS FOR G20 ENGAGEMENT

1. Promote inclusive and community-led adaptation processes

One of the building blocks of a transformational adaptation initiative is its inclusiveness. G20 engagement should prioritise inclusive planning processes that embed local and Indigenous knowledge systems. Public consultations must move beyond tokenism to co-create adaptation solutions that are context-specific, culturally rooted, and structurally equitable. This aligns with G20 priorities on inclusive growth, equality, and sustainable development. South Africa's G20 presidency could support mechanisms that strengthen local governance and leadership, and champion the mainstreaming of community-driven planning into national and regional adaptation efforts. Multilateral institutions, such as the Adaptation Fund, can support these efforts.

2. Develop climate risk and maladaptation assessment frameworks

A transformational shift in adaptation requires tools to anticipate climate risks and avoid maladaptation. The G20 should support the development and adoption of climate risks assessment frameworks tailored to Africa's diverse socioecological landscapes, which should integrate scenario planning, risk mapping and identification of unintended consequences of interventions that may be deemed as transformational. Under South Africa's leadership, G20 working groups may collaborate with Intergovernmental Authority on Development Climate Prediction and Application Centre (IGAD-CPAC), the United Nations Office for Disaster Risk Reduction (UNDRR) and the Africa Network of Centres of Excellence for Disaster Risk Reduction to achieve this.

3. Support integration of transformational adaptation in climate policy governance frameworks

The G20 should encourage its members and African partners to mainstream transformational adaptation principles into National Determined Contributions, NAPs, Long-Term Low Emission Development Strategies (LT-LEDS) and sectoral policy documents such as National Biodiversity Strategy and Action Plans (NBSAPs) and Land Degradation Neutrality (LDN) targets under the United Nations Convention on Biological Diversity (UNCBD) and the United Nations Convention to Combat Desertification Change (UNCCD), respectively. South Africa, through its leadership, can advocate to embed transformational adaptation within these documents. The G20 could work with the African Union and regional economic communities to support countries in realising this goal.

4. Champion the development of indicators to measure transformational impact

As climate negotiators meet at COP30 in Belém, Brazil in November 2025, one anticipated outcome is the rationalisation and selection of indicators for the Global Goal on Adaptation and the methodological assessment of adaptation efforts across sectors. The G20, through the South Africa's presidency, can influence the global agenda by championing indicators that capture outcomes on transformational adaptation. Partners that the G20 presidency may work with to realise this recommendation include the CGIAR and the UN Foundation.

5. Promote the adaptation of legal frameworks for transformational adaptation

As African countries develop their national climate change legislations, there is an opportunity to formalise the role of legislation in supporting transformational adaptation. South Africa G20 Presidency may advance this legislative movement by reviewing implementation of its Climate Change Act, 2024 through which African countries may draw lessons and best practices in the development and revision of their climate change laws. The G20 presidency and its working groups could collaborate with partners which include the African Group of Negotiators Experts Support (AGNES) which develop a Model Climate

Change Law Framework for Africa, others are the National Institute for Legislative and Democratic Studies (NILDS), Africa Network of Parliamentarians on Climate Change (ANPCC), and the UNFCCC Regional Collaboration Centres (RCCs) across Africa.

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About SALLA

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