Climate

Conclusion: Challenges to Achieving a Low-Carbon Future

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Because of its limited ability to adapt to climate change, Africa will suffer more than any other region from climate change impacts despite having contributed little to the cause of this problem. Decisive leadership and an effective executive system capable of averting a global crisis are sorely needed. Today, geopolitics and domestic politics intertwine, leading to an uncertain future with devastating outcomes and consequences for many, particularly in Africa. Sustainable solutions and adaptation are becoming increasingly urgent. We examine many of these challenges in the theme Africa in the World.

Our findings highlight the complex nature of Africa's transition away from fossil fuels, presented in the separate theme on Energy. Contrary to the rapid shifts proposed by UNEP and others, our analysis suggests a more gradual phasing out in Africa, starting with coal, then reducing oil and eventually gas beyond 2050. That transition is moving fast in many advanced economies such as Europe, North America, Japan and China. It is much slower in developing countries, particularly in Africa, which requires substantial support from wealthier nations to establish a feasible transition to renewables and carbon emission pathways, such as through some of the proceedings that could come from a global carbon tax. For Africa, climate finance is the critical enabler of the global energy transition and must be at the top of the COP agenda.

To date, little has come of previous initiatives such as the 2021 Glasgow Financial Alliance for Net Zero (GFANZ) that were to bring US$130 trillion to bear on the climate crisis or the Just Energy Transition Partnerships (JET-Ps) that was initiated at COP26. The flagship JET-Ps in South Africa and Indonesia have barely raised one-tenth of what is required, and those in Vietnam and Senegal have not fared much better. COP27 subsequently introduced a loss and damage fund that aims to provide financial assistance to nations most vulnerable and impacted by the effects of climate change, but it is still unfunded. Rather than the promises from the developed countries who promoted both, China is powering ahead in spending on renewables.

The question is: **Who will finance the significant investments required for gas and oil in Africa as other regions gradually move away from fossil fuels?** The world needs decisive action to shift Africa from its current fossil fuel dependency. In addition to carbon sequestration, this theme examined the implementation of a global carbon tax, an essential response component.

Adaptation efforts must catch up to mitigation efforts globally and in Africa. Efforts to adapt to climate change must prioritise the protection of communities, ecosystems and economies from its adverse effects. Our report underscores the importance of enhancing resilience through various means—be it poverty alleviation, conflict prevention or healthcare improvements—alongside modifying infrastructure (land use planning, climate-smart practices, climate-resilient infrastructure), being more efficient with natural resources (e.g. water and land use management) and formulating policies that enable societies to respond effectively to evolving climatic conditions (aid support, investments, early-warning systems, etc.) to withstand climate challenges better. This becomes particularly complex when accounting for concurrent crises like poverty, undernutrition, and civil conflict. Africa's best response to the emerging threat of climate change is to pursue a sustainable development pathway, as reflected in the Sustainable Africa scenario.

Adopting diverse carbon reduction strategies globally, including carbon taxes and cap-and-trade systems, reflects a commitment to environmental stewardship. However, geopolitical tensions, notably between China, the US and the EU, pose significant challenges to these efforts. On the one hand, the competition for green energy leadership could create a 'race to the top', spurring green investment, innovation and international climate action. On the other hand, the rising tensions undermine cooperation and fragment the green energy market, and the election of Donald Trump as the 47th US President means that the US is, again, stepping away from climate action. Geopolitics tensions undermine collaboration across ideological divides. With China dominating almost all clean technology supply chains, policymakers must square the imperative to reduce dependencies with adequate cooperation to meet decarbonisation goals.

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Carbon pricing mechanisms like the EU's Emissions Trading System offer a flexible approach to reducing greenhouse gas emissions. In addition, carbon offset programs enable entities to counterbalance their carbon footprint by investing in projects that mitigate emissions but remain controversial. Industries worldwide, particularly the aviation sector, have prominently embraced this approach through reforestation, renewable energy projects and energy efficiency initiatives. Still, the system is prone to greenwashing and shifting of responsibilities.

The impact on vulnerable populations and the risk of carbon leakages mar the effectiveness of these systems and could inadvertently shift emissions to less regulated regions. As a result, for the EU, the Carbon Border Adjustments Mechanism (CBAM) is a mechanism that levels the playing field for imports and domestic products. It intends to align industries within and outside the EU and impact specific carbon-intensive goods from 2026 onward. However, concerns have been raised regarding the potential harm to industries in low- and middle-income countries that will need more resources to decarbonise their production. Without careful consideration, CBAM will increase global inequalities and proactive measures are required to ensure that carbon strategies are practical and globally equitable. UNCTAD notes that African countries need expanded access to foreign currencies through central bank swaps and enhanced resilience during external crises through standstill rules on debtors' obligations, such as climate-resilient debt clauses. This, the Conference notes, would allow a halt in debt repayments, providing some breathing space for crisis management.

Moreover, integrating adaptation measures across sectors, including healthcare, agricultural practices, transportation, infrastructure resilience, social services, urban planning, etc, is imperative. Strengthening Africa's healthcare infrastructure, establishing robust disease surveillance systems, facilitating widespread access to vaccines, incorporating climate-resilient city design and fostering international collaboration are indispensable steps in building adaptive resilience across the region.

The preceding analysis emphasises the urgency of addressing both the causes and effects of climate change in Africa and the need for a concerted global effort to support the continent's transition to a low-carbon future. Such a response must be multifaceted and include mitigation strategies, adaptation efforts and financial investments tailored to the continent's unique context. Central to that approach would be a trade-off between Africa's role as a carbon sink and the opportunities offered via a global carbon tax.

Africa's climate strategy must leverage its natural carbon sink potential, accelerate the clean energy transition, secure climate finance and implement fair global carbon policies. A differentiated carbon tax, strong domestic policies and international support can help Africa balance economic growth with climate resilience, ensuring a sustainable and equitable future.

1. Strengthen Africa's role as a global carbon sink

- Protecting, restoring and expanding forests, wetlands, peatlands and grasslands is a priority for enhancing carbon sequestration.
- Implement and enforce stronger anti-deforestation policies to curb illegal logging and land degradation.
- Secure international financing and investment for large-scale reforestation and conservation projects.
- Expand initiatives such as the Great Green Wall to combat desertification and restore degraded land.

2. Implement a fair and effective global carbon tax

- Establish a differentiated global carbon tax system where contributions are based on income classification.
- Use carbon tax revenues to finance renewable energy projects, climate adaptation and resilience-building initiatives in developing countries.

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- Ensure that all significant emitters participate in the carbon tax framework to prevent carbon leakage and maintain global competitiveness.
- Advocate for fair trade policies to prevent measures like the CBAM from unfairly penalising African economies.

3. Accelerate the transition to renewable energy

- Scale up investments in solar, wind, hydro, geothermal and SMNR energy to reduce dependency on fossil fuels.
- Using decentralised renewable solutions, improve energy efficiency and expand electricity access to underserved communities.
- Secure climate finance and technology transfer agreements to facilitate Africa's clean energy transition.

4. Develop and implement comprehensive carbon reduction strategies

- To incentivise emissions reductions, adopt carbon pricing mechanisms, including carbon taxes and emissions trading systems.
- Promote climate-smart agriculture and sustainable land-use practices to minimise deforestation and soil degradation emissions.
- Explore innovative waste-to-energy solutions, such as converting municipal solid waste into biofuels, to reduce methane emissions.

5. Strengthen climate finance and global cooperation

- Ensure that wealthy nations meet their climate finance commitments to fund adaptation and mitigation efforts in Africa.
- Fully operationalise and finance the Global Loss and Damage Fund to support countries most affected by climate change.
- Expand access to green investment funds, debt relief mechanisms and concessional financing to enable sustainable development.
- Encourage regional cooperation among African nations to implement joint climate strategies and share technological advancements.

6. Enhance adaptation and resilience efforts

- Invest in climate-resilient infrastructure, including flood defences, drought-resistant agriculture and sustainable urban planning.
- Strengthen early warning systems and disaster response mechanisms to protect vulnerable communities from climate-induced disasters.
- Support capacity-building programs to equip African governments with the skills and knowledge to implement effective climate policies.

7. Align climate policies with Sustainable Development Goals

- Ensure that climate strategies align with Africa's broader development objectives, including poverty reduction, economic growth and job creation.
- Promote green job creation in renewable energy, conservation and sustainable agriculture sectors.
- Advocate for just transition policies that protect workers and communities dependent on fossil fuel industries.

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Chart 14: Recommendations

Recommendations

- Protecting, restoring, and expanding forests, wetlands, peatlands, and grasslands is a priority for enhancing carbon sequestration.
- Implement and enforce stronger anti-deforestation policies to curb illegal logging and land degradation.
- Establish a differentiated global carbon tax system where contributions are based on income classification.
- Scale up investments in solar, wind, hydro, geothermal, and SMNR energy to reduce dependency on fossil fuels.
- Secure climate finance and technology transfer agreements to facilitate Africa's clean energy transition.
- To incentivise emissions reductions, adopt carbon pricing mechanisms, including carbon taxes and emissions trading systems.
- Promote climate-smart agriculture and sustainable land-use practices to minimise deforestation and soil degradation emissions.
- Ensure that wealthy nations meet their climate finance commitments to fund adaptation and mitigation efforts in Africa.
- Invest in climate-resilient infrastructure, including flood defences, drought-resistant agriculture, and sustainable urban planning.
- Ensure that climate strategies align with Africa's broader development objectives, including poverty reduction, economic growth, and job creation.

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Ms Alize le Roux joined the AFI in May 2021 as a senior researcher. Before joining the ISS, she worked as a principal geo-informatics researcher at the CSIR, supporting various local and national policy- and decision-makers with long-term planning support. Alize has 14 years of experience in spatial data analysis, disaster risk reduction and urban and regional modelling. She has a master's degree in geographical sciences from the University of Utrecht, specialising in multi-hazard risk assessments and spatial decision support systems.

Dr Jakkie Cilliers is the founder and former executive director of the ISS. He currently serves as chair of the ISS Board of Trustees, head of the African Futures and Innovation (AFI) programme at the Institute's Pretoria office, and an extraordinary professor at the University of Pretoria. His 2017 best-seller Fate of the Nation addresses South Africa's future from political, economic and social perspectives. His three most recent books, Africa First! Igniting a Growth Revolution (March 2020), The Future of Africa: Challenges and Opportunities (April 2021), and Africa Tomorrow: Pathways to Prosperity (June 2022) offer rigorous analyses of the continent as a whole. From August to December 2025, Cilliers was a Richard von Weizsäcker Fellow at the Robert Bosch Academy in Berlin.

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