

Centre of African Studies CONFERENCE 2025

Climate Dynamics in Post-Carbon Africa

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Conference Report



THE UNIVERSITY
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Centre for
Business,
Climate Change
& Sustainability



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- **Seth Amanfo** – Regional Director, Africa and the Middle East
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- **Prof. Luca Taschini** – Director, Centre for Business, Climate Change and Sustainability (B-CCaS)
- **Dr. Karishma Ansaram** – Member of B-CCaS and principal contributor to the conference programme.
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Africa is not
going to wait to
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achieve climate
justice.

Uzoamaka Nwamarah

Climate Adviser, Commonwealth Secretariat

Introduction

The Climate Dynamics in Post-Carbon Africa conference, held on 24–25 April 2025 at the University of Edinburgh Business School, brought together over 170 participants, including researchers, policymakers, funders, and academics, to critically explore the political, epistemic, economic, and ethical dimensions of climate transitions across the African continent. Organised by the Centre of African Studies, the Centre for Business, Climate Change and Sustainability (B-CCaS), the Mastercard Foundation, the Edinburgh Earth Initiative, and the WESAF Doctoral Programme, the conference served as a transdisciplinary platform to highlight African perspectives in the global climate discourse. Through thirteen thematic panels and four keynote sessions, the event explored key themes including governance, energy justice, gendered adaptation, indigenous knowledge systems, cultural artefacts, and the complex politics of climate finance. Rather than producing a singular blueprint for transition, the conference offered a mosaic of insights rooted in lived experiences, historical memory, and speculative imagination. Importantly, the conference repositioned Africa not merely as a site of climate vulnerability but as a site of climate protagonism.

While the continent faces disproportionate exposure to climate shocks, including intensifying droughts, erratic rainfall, displacement, food insecurity, and biodiversity loss, it is also a space of vibrant adaptation, innovation, and resistance. Between 2021 and 2023, over 110 million people in Africa were affected by weather-related disasters¹. The Horn of Africa's drought between 2020–2023 was one of the region's worst in decades, resulting in over 46 million people impacted, 4.5 million internally displaced, and in Somalia more than 43,000 excess deaths in 2022². Yet rather than depicting Africa as a passive recipient of aid or intervention, speakers consistently affirmed its agency in co-producing plural, just, and post-carbon futures. As noted by the IPCC, Africa is warming at approximately 1.5 times the global average³. Arid and semi-arid zones—such as the Sahel, the Horn, and parts of Southern Africa—are identified as critical climate hotspots. Despite contributing only 3–4% of global cumulative greenhouse gas emissions, Africa endures a disproportionate share of climate impacts⁴. This asymmetry raises profound questions about justice, responsibility, and authority in global climate governance. During the opening keynote, Uzoamaka Nwamarah, climate adviser at the Commonwealth Secretariat, emphasised, **“Africa is not going to wait to be rescued, we are going to take the initiative to achieve climate justice.”**

Participants reconceptualised climate dynamics not merely as meteorological disturbances but as relational, political, and epistemic processes. For instance, a panellist from Marsabit, Kenya, elucidated how communities interpret cloud patterns, animal behaviour, and the condition of cow intestines to predict drought, an approach rooted in relational ethics, spiritual governance, and adaptive memory. “The clouds speak, the trees whisper, and the intestines of animals reveal the truth. We need to listen,” they articulated, challenging the artificial dichotomy between scientific and indigenous knowledge. Climate finance emerged as a recurring focal point. The African Development Bank estimates that the continent requires \$133 billion annually for adaptation and mitigation⁵. However, as of 2023, African countries received only \$19.5 billion, constituting less than 4% of global climate finance flows⁶.

1 WMO (2023). State of the Climate in Africa 2022. World Meteorological Organization. https://library.wmo.int/index.php?lvl=notice_display&id=22226

2 <https://www.emro.who.int/somalia/news/new-study-finds-that-43000-excess-deaths-may-have-occurred-in-2022-from-the-drought-in-somalia.html>

3 IPCC (2022). Sixth Assessment Report – Working Group II: Impacts, Adaptation and Vulnerability. <https://www.ipcc.ch/report/ar6/wg2/>

4 UNEP (2022). Emissions Gap Report 2022. <https://www.unep.org/resources/emissions-gap-report-2022>

5 African Development Bank (AfDB), 2022. Climate Change and Green Growth Strategy 2021–2030.

6 Climate Policy Initiative (2023). Global Landscape of Climate Finance – Africa. <https://www.climatepolicyinitiative.org/publication/africa-climate-finance/>

A significant portion of this funding is channelled through intermediaries and consultancy networks, thereby limiting direct access for local actors. Several speakers advocated for the decolonisation of climate finance, reframing it as a matter not of efficiency but of equity and power. “This is not just about unlocking capital; it’s about redistributing power,” declared one participant, reflecting widespread demands for direct, long-term investments in community-led transitions.

A key theme throughout the conference was that agroecological movements, solar cooperatives, feminist pedagogies, and cultural resistance are already shaping Africa’s climate futures. Youth were not portrayed as future leaders, but as present-day innovators. With over 60% of the population under 25⁷, panellists emphasised that Africa’s youth are not on the periphery of climate action; they are at its forefront. Women were also positioned as vulnerable actors and “survival scientists,” a term coined by Mariachiara Boldrini to honour the adaptive intelligence of rural women navigating overlapping crises. The politics of knowledge production emerged as a central concern. As one discussant remarked, “Knowledge is collaboration, but if someone cannot articulate it in academic English, we exclude them. That is a problem.” This critique highlighted the linguistic, institutional, and epistemic hierarchies in global climate research. Speakers called for epistemic sovereignty, where African knowledge systems are not merely validated or integrated into dominant paradigms, but recognised and resourced on their terms.

Participants also highlighted the aesthetic and cultural dimensions of climate change, encompassing storytelling and ritual, as well as music, textiles, and architecture as modes of environmental imagination and resistance. These expressive forms do not merely reflect climate impacts; they constitute infrastructures of anticipatory knowledge and collective healing. In a provocative framing, Professor Jamie Cross described Africa as “not simply a cooling system, but a redistributor of heat,” inviting deeper reflection on the infrastructural politics of temperature, shade, and access. In this sense, climate dynamics in Africa are not solely about adaptation or resilience; they are about world-making. They unfold through legal struggles, speculative futures, epistemic refusals, and spiritual continuities. The conference revealed that climate change is not merely a phenomenon to be modelled or a risk to be managed; it is a lived condition, a deeply contested terrain, and a generative site of political imagination.

This report synthesises the debates, provocations, and insights that emerged during the *Climate Dynamics in Post-Carbon Africa* conference, held over two days at the University of Edinburgh. Co-convened by the Centre of African Studies, the Centre for Business, Climate Change and Sustainability (B-CCaS), the Edinburgh Earth Initiative, and the WESAF Doctoral Programme, the event brought together scholars, practitioners, policymakers, and community voices to interrogate the political, epistemic, and material dimensions of Africa’s climate futures. This is not a neutral documentation of proceedings but a curated narrative that reflects the spirit of the convening: one grounded in critical dialogue, dissent, and the co-production of knowledge. Rather than aiming for consensus, the conference prioritised multiplicity, foregrounding African perspectives and challenging Global North paradigms that continue to shape climate governance and discourse.

The report is organised into four core sections:

- **Section 1** presents the **Opening Session** and **Keynote Presentations** that launched the conference. These sessions offered powerful framing remarks on collaboration, epistemic sovereignty, and the moral imperative of climate justice, setting the tone for the following critical engagements.

- **Section 2, Day One: Africa's Climate Dynamics – Models, Politics, and Networks**, explores how African institutions, actors, and communities respond to the climate crisis through various governance models, political strategies, and emerging narratives. The morning panels, themed Strategies, Networks, and Governance, critically assessed the institutional frameworks shaping climate responses. The afternoon panels, grouped under **Opportunities and New Vulnerabilities**, examined how green transitions, while full of promise, often produce new risks and exclusions. The **Day One Closing Panel, Climate Change in Africa: Partnerships and Funding**, brought the day to a close with a high-level conversation on the structural enablers of climate resilience. Institutional leaders and development actors reflected on the necessity of building long-term, equitable partnerships that move beyond extractive collaboration.
- **Section 3, Day Two: Reimagining Africa's Climate Leadership**, shifts the focus toward knowledge politics, cultural narratives, and emerging forms of resistance. The day began with a keynote address that challenged dominant perceptions of Africa as a passive recipient in climate discourse. This framing laid the groundwork for the day's panels, which were structured around two interrelated themes: **Knowledge Systems and Epistemic Communities** and **Justice, Power, and Possibility in Energy Futures**. These sessions examined how Indigenous knowledge, artistic and aesthetic practices, gendered experiences, and spatial politics influence and challenge climate transitions on the continent.
- **Section 4** captures the **Open Forum on Teaching Climate Change in Africa**. This dynamic space addressed the pedagogical and political challenges of decolonising climate education and building a curriculum rooted in African realities.

The **Conclusion** distils cross-cutting insights from both days, identifying points of convergence and contestation while outlining key implications for future research, teaching, and policy.



Day One: Africa's Climate Dynamics: Models, Politics, and Networks

Opening Session

The Climate Dynamics in Post-Carbon Africa conference officially commenced with a compelling opening session featuring remarks from three distinguished speakers:

- **Dr Jean-Benoît FALISSE** – Co-director, Centre of African Studies
- **Lucy Young** – Director of Operations, Edinburgh Earth Initiative
- **Dr Karishma Ansaram** – Lecturer, Climate Finance, University of Edinburgh
- **Professor Ruksana Osman** – Deputy Vice Chancellor and Co-Chair, WESAF Doctoral Programme, University of the Witwatersrand

Together, the speakers established a powerful tone for the two-day gathering, firmly anchoring the climate justice discourse within African contexts, voices, and leadership. Dr Jean-Benoit Falisse opened the conference with a warm and thoughtful welcome, acknowledging the diverse contributions of participants from across the continent and beyond. He emphasised the critical role of research in shaping equitable climate futures and underscored the importance of creating inclusive spaces where African scholars, practitioners, and community voices lead the conversation. Lucy Young emphasised the pivotal role of partnerships grounded in reciprocity and mutual respect, particularly between African and global research institutions. She underscored the Edinburgh Earth Initiative's commitment to supporting equitable climate solutions through sustained investment in local capacity and long-term knowledge exchange, a cornerstone of the University of Edinburgh's research.

Dr Karishma Ansaram highlighted the systemic gaps in climate finance education globally. She emphasised that building robust institutional and human capacity in this area is a technical necessity and a structural imperative for facilitating Africa's energy transitions and negotiating equitable terms in global climate governance. Her remarks underscored the importance of nurturing African scholars as key architects of financial literacy and policy innovation in climate resilience.

Professor Ruksana Osman reflected on the critical role of doctoral training and higher education in reshaping Africa's knowledge production landscape. She positioned the WESAF Doctoral Programme as a model for transdisciplinary research grounded in African realities and emphasised the importance of cultivating "knowledge pipelines" that connect research, policy, and practice. Her message framed universities as spaces of inquiry and as agents of justice, inclusion, and transformation.

Collectively, the speakers foregrounded three key themes:

1. The transformative power of collaboration built on equity and mutual accountability.
2. The need for African-led, transdisciplinary research frameworks.
3. The imperative to centre transitions around Africa's social, economic, and epistemic realities.

Keynote Presentations

Following the opening remarks, the session moved to two short but powerful keynote addresses:

- **Mrs Uzoamaka U. Nwamarah** – Advisor, Climate Change, The Commonwealth
- **Dr Robert Bright Mawuko Sogbadji** – Coordinator, Ghana Nuclear Programme; Technical Lead, National Energy Transition Committee, Ghana

Dr. Robert Bright Mawuko Sogbadji (Ghana Ministry of Energy and Green Transitions):

Title: “Africa’s Climate Future: Centring Justice and Leading Transitions”

Key Points:

- **Ghana’s Energy Transition Framework:** Dr. Sogbadji, a senior academic and coordinator of Ghana’s National Energy Transition Framework, outlined the country’s goal to achieve 10% renewable energy (excluding large hydro) by 2030. Ghana, with 89% electricity access, faces challenges in meeting SDG 7 targets due to financial constraints and reliance on gas (60% of the energy mix).
- **Climate Impacts:** Ghana is experiencing climate-related impacts such as flooding and livelihood losses, necessitating a just transition that does not exacerbate existing inequalities. The Framework includes nuclear energy, carbon capture, and renewable technologies like solar and wind to meet growing energy demands.
- **Industrial Opportunity:** Dr. Sogbadji emphasised shifting from raw material exports to manufacturing renewable energy technologies (e.g., solar panels, batteries) using Ghana’s critical minerals (lithium, bauxite, manganese). This approach aims to create jobs, build resilient economies, and redefine Africa’s role in the global economy.
- **Challenges:** Key barriers include limited climate finance, the withdrawal of international funding (e.g., USAID), and political resistance to the adoption of clean energy. Ghana’s energy transition plan prioritises resilience by balancing nuclear, gas, and renewable energy sources to avoid economic vulnerabilities.
- **Policy Initiatives:** Ghana has introduced the Cylinder Recirculation Model for clean cooking, solar-powered streetlights, and tax exemptions for electric vehicles to enhance energy access and reduce inequalities.
- **Call for Partnerships:** Dr Sogbadji called for technological transfers, concessional financing, and market access through partnerships with governments, the private sector, and multilateral institutions to support Africa’s green industrialisation.

Mrs Uzoamaka U. Nwamarah – Advisor, Climate Change, The Commonwealth Secretariat

Key Points:

- **Climate Justice:** Mrs Uzoamaka framed climate change as a justice crisis, noting Africa’s minimal contribution to global emissions (4%) yet severe impacts (e.g., droughts in the Sahel, floods in Madagascar). Africa must reclaim its agency to define a just and inclusive climate future rooted in its priorities. She, therefore, urged the conference to forge a truly pan-African narrative on the global climate question, centred on the principles of justice, youth and gender inclusion.
- **Africa’s Potential:** Africa holds 60% of the world’s solar potential and 30% of critical minerals, positioning it as the “green grid engine” for the 21st century. The Congo Basin, the second-largest rainforest, absorbs 1.5 billion tons of carbon annually, underscoring Africa’s role in global climate solutions.

- **Commonwealth Initiatives:** The Commonwealth supports African countries through the Sustainable Energy Transition Agenda and the Climate Finance Access Hub, securing 34 million USD to support climate resilience and mitigation. The agenda focuses on enabling frameworks, technology innovation, and inclusive transitions.
- **South-South Cooperation:** Mrs Uzoamaka emphasised regional collaboration to influence global climate policies, ensuring mechanisms like carbon markets reflect African realities (e.g., recognising the Congo Basin's carbon absorption).
- **Youth and Innovation:** With 400 million young people, Africa must invest in green skills and innovation to drive climate solutions, rejecting the notion of choosing between development and decarbonisation.
- **Global Responsibility:** The Global North must address finance and infrastructure gaps, supporting Africa's ambitions through equitable partnerships.

Panel Discussion:

- **Focus:** The panel, featuring Dr. Sogbadji and Mrs. Uzoamaka, explored tensions in Africa's energy transition, including political resistance, financial constraints, and dynamics of global discourse.
- **Key Tensions:**
 - **Political Resistance:** Communities and politicians often prefer traditional energy sources (e.g., large hydro) over renewables due to familiarity or campaign promises, requiring education and policy alignment. For many communities, renewable energy infrastructures do not represent visions of development, suggesting that traditional energy infrastructures, such as oil and gas, continue to dominate the spectacles and imaginaries of development.
 - **Financial Barriers:** Limited climate finance (3% globally to Africa) and withdrawal of donor support (e.g., USAID) strain African governments' ability to fund transitions.
 - **Global Discourse:** COP negotiations often fail to reflect African priorities, necessitating stronger African representation backed by evidence-based research.
- **Solutions:**
 - **Systemic Engagement:** African negotiators, supported by technocrats and ministers, must influence global climate policies to reflect regional realities and concerns.
 - **Regional Collaboration:** South-south cooperation, as exemplified by the African Union and Commonwealth, can amplify Africa's voice and secure resources.
 - **Infrastructure and Skills:** Investments in storage, grid infrastructure, and green skills training are crucial for overcoming intermittency and economic challenges.

Key Takeaways & Critical Perspectives

- **Africa's Role:** Africa should position itself as a leader in the global climate fight, not a victim, with vast renewable energy potential (60% of the world's best solar potential) and critical minerals (30% of the global supply) essential for energy transitions.

It was inspiring to
be among and
share ideas with
so many bright
young African
scholars.

Conference Delegate

- **Justice-centred Transition:** Climate action must prioritise justice, encompassing climate justice, energy justice, and intergenerational justice, ensuring that no one is left behind, particularly the most vulnerable communities.
- **Reclaiming Agency:** Africa must define its climate narrative rooted in its realities, languages, and priorities, rejecting foreign metrics and frameworks that do not align with African contexts.

Energy Transition Challenges and Opportunities

- **Industrial Opportunity:** The energy transition is viewed as an opportunity to shift Africa from being a raw material exporter to a manufacturer of renewable energy technologies, leveraging critical minerals such as lithium and cobalt for solar panels, batteries, and wind turbines.
- **Challenges:** Key challenges include insufficient climate finance (with only 3% of global climate finance flows allocated to Africa), the withdrawal of international funding (e.g., USAID), and political resistance to clean energy adoption due to reliance on fossil fuels or large hydroelectric projects.

Financial and Structural Barriers

- **Climate Finance Gaps:** Limited access to finance hinders Africa's energy transition, with only 34 million USD secured through initiatives like the Commonwealth Climate Finance Access Hub.
- **Structural Issues:** Dependence on extractive industries and a lack of local infrastructure for processing critical minerals limit economic benefits. National development plans must align with climate goals to attract investment.
- **South-South Cooperation:** Stronger regional collaboration, such as through the African Union and Commonwealth, is essential to advocate for African priorities in global climate negotiations and secure technology transfers.

Practical Solutions and Policy Recommendations

- **Local Manufacturing:** Policies should prioritise local content in renewable energy manufacturing, incentivising investors to establish assembly plants in Africa and fostering technology transfer.
- **Skills Development:** Training programs to equip African youth with green skills for jobs in renewable energy sectors, addressing the continent's 400 million young population.
- **Inclusive Transition:** Ensure vulnerable communities, youth, and indigenous knowledge are integrated into energy transition plans, supported by regulatory frameworks and public-private partnerships.
- **Global Advocacy:** African negotiators, backed by evidence-based research, must influence global climate policies (e.g., at COP meetings) to reflect African realities, such as the Congo Basin's role in carbon absorption.

Key Themes:

- **Collaboration:** The session underscored the need for transdisciplinary and cross-continental partnerships to address the climate emergency.
- **Climate Justice:** A just transition must prioritise equity, inclusion, and African-led solutions.

- **Energy Transition:** Africa’s potential to lead in renewable energy and green industrialisation requires overcoming financial and political barriers.
- **South-South Cooperation:** Regional networks are crucial for advocating African priorities in global climate frameworks.

Panel Discussions

Building on the momentum of the opening addresses, the remainder of Day One unfolded through a series of rich, interdisciplinary panel discussions. These sessions convened diverse voices. Rather than offering prescriptive solutions, the panels cultivated a space for critical reflection, debate, and the co-production of knowledge rooted in African contexts. The following section presents a detailed synthesis of the panel discussions and their key takeaways, organised around major thematic strands.

Strategies, Networks, and Governance

The morning sessions of Day One were organised under the thematic banner of “Strategies, Networks, and Governance,” offering a critical exploration of the institutional frameworks, stakeholder alliances, and policy logics that underpin climate governance across the continent. These panels examined how power circulates across local, national, and transnational levels, revealing the transformative potential and structural constraints of existing governance models. Across the sessions, presenters challenged technocratic and top-down approaches, instead calling for inclusive, accountable, and context-responsive strategies that centre African leadership and knowledge systems in driving a just transition.

Panel 1: Governance and Evolving Stakeholder Networks

This panel session explored shifting institutional landscapes and multi-actor governance mechanisms in Africa’s climate response.

Speakers included:

- **Valentina Acquafredda** – The farmers, the state and climate change in Ethiopia
- **David A. Chikwaza** – IKS and WSK Knowledge and Stakeholder Attitudes
- **Patrick Hosea** – Exploring African perspectives on climate geoengineering engagement
- **Wiebe Nauta** – New African Voices in the Global Climate Movement: Falling on deaf ears?

This panel examined the evolving institutional and political configurations that shape African climate governance. Speakers reflected on the complex relationships between state, non-state, and private actors in designing and implementing climate strategies across the continent. The panel illuminated the tensions and opportunities within Africa’s climate governance landscape, revealing structural limitations and emerging spaces for innovation. Valentina presented the challenges faced by Ethiopian farmers in interacting with state institutions. On the other hand, David presented the contested relationship between Indigenous and Western scientific knowledge, highlighting **how power, voice, and legitimacy shape adaptation responses**. The discussion on climate geoengineering introduced a timely and underexplored frontier of climate governance, while the critique of international climate movements underscored the need for genuine inclusion of African actors. Ultimately, the panel called for reimagined governance frameworks rooted in pluralism, co-creation, and local leadership that can effectively respond to the continent’s diverse and dynamic climate realities.

If we're talking
about climate
and human
security, why is
land ownership
not part of the
conversation?

Lecturer

University of the Witwatersrand

Key Discussion Points:

- Climate governance is increasingly multi-actor and centralised, requiring new collaboration, coordination, and accountability frameworks.
- Valentina Acquafredda examined Ethiopia's often-tense interface between farmers and state climate agendas, noting the limited responsiveness of centralised institutions to local agricultural needs.
- David Chikwaza presented comparative findings on stakeholder attitudes toward Indigenous Knowledge Systems (IKS) and Western Scientific Knowledge (WSK), highlighting areas of complementarity and conflict in climate adaptation efforts.
- Patrick Hosea introduced African responses to climate geoengineering as a critical area of emerging governance, calling for early engagement and ethical safeguards rooted in local perspectives.
- Wiebe Nauta questioned the effectiveness of international climate movements in representing African voices and critiqued the tokenistic inclusion of African actors in global climate forums.
- Participants asked how national governments could incorporate farmer feedback into state-led climate programs better.

Others discussed the implications of privileging one knowledge system over another in

Panel 2: (Il)licit Frontiers: Moral and Legal Entanglements of Energy in Africa

Speakers Included:

- **Ricardo Reboredo & Tereza Nemeckova** – Problematizing 'Green Growth': Exploring the Effects of Critical Minerals Mining in Zambia
- **Isabelle Nazarian and Caroline Marful** – Assessing South African and Ghanaian mining structures, environmental tensions, regulatory landscapes and workforces.
- **Jackson Tamunosaki Jack (with Papa Sow, Nordic Africa Institute, Lasisi Raimi, Federal University Otuoke, Nigeria)** Nigeria's Underground Oil Economy and Cross-Border Illicit Petroleum Trade: A Clog to Post-Carbon Transition in West Africa Sub-region?
- **Fayokemi Olorundami** - A Critical Analysis of Legal Uncertainties in Nigeria's Just Energy Transition Plan.

This session focused on the contradictions of global green growth agendas through an incisive critique of critical mineral extraction in Zambia. Reboredo and Nemeckova challenged the celebratory narrative surrounding Zambia's role as a supplier of copper and cobalt minerals, which are central to the clean energy transition. While touted as a development opportunity, the authors argued that this boom is entrenching extractivist logics and reproducing longstanding patterns of inequality, dependency, and environmental degradation. Their research highlighted how the discourse of "green growth" conceals the costs borne by Zambian communities: from land dispossession and ecological damage to labour exploitation and minimal domestic value addition. Instead of fostering structural transformation, the expansion of mining linked to the energy transition has reactivated colonial infrastructures of extraction, serving global decarbonisation goals at the expense of local livelihoods. The presentation invited reflection on whether Africa's role in the green transition is being framed in extractive, instrumentalist terms, where sustainability elsewhere relies on continued resource sacrifice in the Global South. Rather than simply reforming extractive regimes, the presenters called for a reimagining of development models based on economic sovereignty, environmental justice, and distributive equity.

Key Discussion Points:

- Zambia's critical mineral sector is being revitalised under the banner of green growth, yet the structural dynamics of exploitation, marginalisation, and underdevelopment persist.
- The clean energy transition has generated a new form of extractivism, one that is 'green' in rhetoric but grounded in familiar hierarchies of global resource control.
- Local communities are experiencing the environmental and social externalities of mining without meaningful participation or benefit-sharing.
- The green growth paradigm prioritises global decarbonisation targets while sidelining questions of local justice, land rights, and ecological health.
- Participants questioned whether current mineral-based development trajectories truly offer transformative potential or merely deepen dependency on volatile global commodity markets.
- The session underscored the urgency of moving beyond technocratic fixes to address the political economy of extraction and advocate for just, post-extractive futures.

Panel 3: Green Finance and Market Networks

This session examined the architecture, access, and accountability of climate finance and carbon markets.

Presentations:

- **Andrew McKinley** – Corporate Commitments & Environmental Externalities in the African Oil Sector
- **Patrick Odetsi** – Regulatory Framework for Green Bonds in Ghana and Nigeria
- **Stephanie Borchardt** – Equity Disparities in South Africa's Renewable Energy Programme
- **Matthew Snell & Morven McEachern** – Responsible Innovation in African Solar Energy
- **Samuel Wenyah** – Plastic Waste Buy-Back Systems for Circular Economy

Panel 3 provided a multi-layered examination of green finance and governance innovations in the African context. From oil to solar to plastic waste, presenters illustrated how market mechanisms intersect with environmental justice. Andrew McKinley shed light on corporate environmental disclosures in Africa's oil sector, exposing gaps in accountability and the self-reported nature of environmental impacts. Patrick Odetsi advocated for a more standardised regulatory framework for green bonds in Ghana and Nigeria, positing it as crucial for scaling climate finance and supporting the energy transition.

Stephanie Borchardt's analysis of South Africa's renewable energy programme revealed troubling disparities in local benefits, emphasising that transitions cannot be just without equity. Matthew Snell and Morven McEachern introduced the concept of responsible innovation, emphasising that ethical and inclusive practices must accompany technological advancements in solar energy. Closing the panel, Samuel Winyah's presentation on plastic waste buy-back systems spotlighted grassroots innovation. His case study of the "Bus Stop Boys" in Ghana demonstrated how community-led waste collection and recycling can anchor broader circular economy goals.

Key Discussion Points:

- Gaps in environmental governance in Africa's oil sector and the role of corporate reporting.
- The necessity for standardised green bond regulations to accelerate energy transition in West Africa.
- Structural inequities in implementing South Africa's renewable energy programme locally.
- Importance of embedding responsibility and ethics in solar energy innovations across Africa.
- Grassroots circular economy models, such as Ghana's plastic waste initiatives.
- Interest in how green bonds can be scaled responsibly.
- Engagement around the role of local actors in holding corporations accountable.
- Discussion on how bottom-up initiatives (e.g., Bus Stop Boys) can be supported at scale.

Opportunities and New Vulnerabilities

As the conference moved into the afternoon, the focus shifted to Opportunities and New Vulnerabilities. This thematic strand interrogated the paradoxes in climate solutions, how emerging green economies, technological innovations, and adaptation strategies can simultaneously empower and marginalise. These sessions exposed the uneven geographies of risk and benefit, drawing attention to how new forms of precarity are being produced in the name of resilience and progress. The day's discussions traced a compelling arc: from the systems that organise climate governance to the social consequences they generate.

Panel 1: Climate-Induced Unrests and Violence

This panel examined the complex interplay between climate shocks, environmental degradation, governance failures, and violent conflict. Drawing on diverse case studies from South Africa and the Lake Chad Basin, the session examined how climate-induced vulnerabilities create opportunities for extremism, fuel political discontent, and erode social cohesion. The presentations challenged narrow security frameworks by arguing for more justice-centred, adaptation-based approaches to addressing unrest.

Presentations:

- **Folahanmi Aina** – De-Weaponising Climate-Induced Recruitment: Prospects for Adaptation as Non-Kinetic Counter-Terrorism in the Lake Chad Basin,
- **Bonaventure Chia** – Climate Change and Violent Extremism in Northern Nigeria
- **Ruth Bookbinder** – Just Transitions, Coal Communities, and the Politics of Participation in Mpumalanga,
- **Alex Beresford** – Externalisation, Sovereignty, and the Failure of Participatory Energy Transition in South Africa

Aina and Chia explored how extremist groups exploit climate-induced displacement, poverty, and weak governance to recruit vulnerable populations in Northern Nigeria and the broader Lake Chad Basin. Aina proposed integrating climate adaptation into counter-terrorism strategies, such as through water security and climate-resilient livelihoods. Drawing from Social Disorganisation Theory, Chia argued that climate change not only fosters vulnerability but also disrupts institutional capacity to respond to extremism effectively.

While focused on South Africa, Bookbinder and Beresford offered a complementary critique of how poorly

designed energy transitions can provoke unrest. Their fieldwork in Mpumalanga revealed how perceived elite-driven consultation processes under the Just Energy Transition Partnership (JETP) have contributed to alienation, anger, and rising resistance among coal-dependent communities. Some workers threatened sabotage in response to top-down plans failing to deliver procedural and distributive justice.

Collectively, the panel foregrounded the risks of ignoring local agency in climate transitions. Whether violent extremism or social collapse, climate-induced unrest is shaped as much by marginalisation, failed governance, and epistemic injustice as by climate shocks themselves.

Key Discussion Points:

- Climate change catalyses conflict, amplifying social, economic, and governance vulnerabilities.
- Militarised responses to extremism are insufficient, especially when underlying environmental and political drivers are ignored.
- In South Africa, exclusion from energy transition processes has generated widespread disillusionment and emerging resistance threats.
- Gender-based violence and exploitation intensify under conditions of economic desperation and social breakdown, particularly in transition zones.
- Climate adaptation, participatory governance, and distributive justice must be central to preventing unrest in conflict regions and all contexts undergoing rapid change.

Panel 2: Climate-Induced Migration and Refugees

This panel analysed displacement trends, governance gaps, and the framing of mobility as a form of climate adaptation.

Presentations

- **Dr. Victor Agboga** – Evaluating Attitudes Towards Climate-Induced Pastoralism
- **Boris Happy** – Climate Change and Human Security: Environmental Threats and Insecurity in Nigeria’s Niger Delta
- **Benjamin Warindi** – Energy in Exile: The Moral and Legal Entanglements of Energy Access for Refugees in Africa

Speakers explored the lived implications of climate-induced displacement, revealing the structural inequities faced by mobile populations and refugees across the continent. Agboga raised a poignant question: “Would people in more stable environments be willing to accommodate climate victims in their communities and homes?” He argued that while many endorse climate solutions in principle, few are prepared to bear the social and political costs of implementation. Boris Happy traced how environmental degradation has fuelled human insecurity in the Niger Delta, linking poverty, conflict, and displacement. Meanwhile, Warindi provided a compelling analysis of the energy access crisis faced by refugee communities. He argued that energy access is not a matter of charity, but rather a matter of justice. He highlighted how international legal frameworks often fail to guarantee equitable access to infrastructure for displaced populations.

Key Discussion Points:

- Migration was reframed not as a failure or crisis, but as a deliberate strategy of resilience and environmental adaptation.
- The conflict between farmers and herders was discussed beyond surface-level climate explanations, pointing to deeper issues of land, governance, and historical inequalities.
- Governmental support for climate-induced migration remains limited, fragmented, and largely reactive.
- Uganda's inclusive refugee framework was highlighted as a promising, imperfect, regional model for managing climate mobility.
- Discussions underscored the neglect of gender, Indigenous knowledge, and social justice in displacement responses.
- The panel raised concerns about how land grabs, extractive economies, and market-driven adaptation solutions shape displacement.
- A University of the Witwatersrand lecturer asked: "If we're talking about climate and human security, why is land ownership not part of the conversation?"

This panel focused on the structural enablers and constraints that shape climate-induced displacement, with a particular emphasis on the intersections of political economy, governance, equity, and knowledge systems. Discussions underscored the critical need to move beyond simplistic framings of migration and instead interrogate deeper governance failures and structural inequalities. The debate repeatedly returned to the importance of understanding entrenched narratives around farmer–herder conflicts, which often mask the deeper political and environmental dynamics. Speakers noted that while mobility can be a strategy for adaptation, state neglect and the absence of enabling frameworks frequently lead to the criminalisation and marginalisation of displaced groups. Uganda's progressive refugee policy was cited as a positive model for integrating displaced communities, yet questions remained about its scalability and sustainability in other contexts. Panellists also highlighted the marginalisation of Indigenous knowledge and the need for more inclusive climate governance that values plural epistemologies. The roles of capitalism and market-led solutions in perpetuating climate vulnerability, as well as questions surrounding land rights, access, and restitution, were critically examined. Gendered dimensions of displacement and adaptation were woven throughout the discussions, emphasising that climate responses must be intersectional and justice-centred.

Panel 3: African Voices, Environmental Governance, and the Green Global Order

Speakers & Presentations:

- **Dr Freeman Mateko** – Green energy transition adoption in Zimbabwe: Challenges, capabilities and innovation patterns in the Fourth Industrial Revolution Era.
- **Tomy Ncube & Dr Una Murray** – Greening Africa’s Future: How Far Gone from the 2009 Green Jobs Initiative?

This panel critically explored how African countries are grappling with the intersecting demands of climate change, green transitions, and inclusive development, with a particular focus on energy systems and labour markets. Presentations foregrounded both structural constraints and innovation pathways, engaging deeply with the contradictions between global climate ambitions and local development realities.

The first presentation examined Zimbabwe’s National Renewable Energy Policy (NREP) 2030, which sets out ambitious goals including the generation of 2,000 MW of renewable energy and a 40% reduction in economy-wide emissions. However, these aspirations were contrasted with the commissioning of a new 600 MW coal-fired power plant in 2023, a stark reminder of the ongoing trade-offs between energy access, economic imperatives, and climate commitments. The speaker outlined how infrastructural deficits, policy incoherence, and fragmented innovation ecosystems have limited Zimbabwe’s ability to transition toward sustainable energy in a coordinated and equitable manner.

Tomy Ncube and Dr Una Murray offered a critical review of the African Green Jobs Initiative launched in 2009. Drawing on extensive literature, their analysis revealed that while the initiative introduced a promising vision for linking climate action with employment generation, progress has been uneven and largely symbolic. Green jobs remain poorly defined, weakly embedded in national policy frameworks, and inadequately resourced. Ncube and Murray argued for a reconceptualisation of green jobs, one that is not simply about technological change, but also about labour justice, skills development, and institutional reform. They emphasised the urgent need to align green employment strategies with Africa’s broader socio-economic priorities, particularly in the context of youth unemployment and informal employment.

Together, the presentations emphasised that green transitions in Africa must be understood as deeply political and context-specific processes, not just technical or environmental fixes.

Key Discussion Points:

- Energy transitions and employment creation must be grounded in the realities of African political economies, where climate goals often intersect and sometimes clash with imperatives for industrialisation and job creation.
- Zimbabwe’s case illustrates the persistent contradictions in policy implementation, as fossil fuel expansion continues even under the banner of green ambition.
- Across the continent, the green jobs agenda has stalled, with limited progress since the 2009 Green Jobs Initiative. Many national frameworks lack operational clarity and fail to integrate green employment into broader labour and education policy.
- Policy incoherence and institutional fragmentation continue to undermine the scalability of renewable energy and green job programmes.

- A capabilities gap in skills training, R&D, and innovation financing limits Africa's capacity to localise green transitions and avoid dependency on external models and technologies.
- Panellists called for systemic investment in human capital, innovation ecosystems, and inclusive governance structures that centre African agency and knowledge in the green transition.

Day one Closing Panel: Climate Change in Africa – Partnerships and Funding

Following a day of rich and multifaceted panel discussions that unpacked the governance, finance, mobility, and justice dimensions of Africa's post-carbon transitions, the conference shifted focus to a high-level reflection on the enabling conditions necessary for climate action to succeed. Framed under the theme **“Climate Change in Africa – Partnerships and Funding,”** the closing session of Day One brought together institutional leaders, policy actors, and development practitioners to examine how strategic collaborations, inclusive financing mechanisms, and youth leadership can anchor resilient and locally grounded climate solutions across the continent.

Panellists included:

- **Charlie Bevan** – Moderator – Program Director, Mastercard Foundation Scholars Program, University of Edinburgh
- **Dr. Conor Snowden** – Interim Head of International Research Engagement, Edinburgh Research Office
- **Ivy Mwai** – Head of Partnership Network, Mastercard Foundation
- **Dr. Seth Amanfo** – Regional Director for Africa and the Middle East, Edinburgh Global
- **Nicole Kempis** – Manager (Development and Programme), Climate Strategies

Framed around the challenge of declining climate research funding from traditional Global North donors, the panel explored new opportunities in emerging intersections such as climate-health and EU-funded collaborations that centre African institutions. Dr. Snowden emphasised the need for shared purpose and long-term action, acknowledging the constraints of current funding architectures while advocating for sustained global partnerships. A key emphasis of the session was the call for African-led and locally rooted climate responses. Panellists warned that too much climate funding continues to bypass local actors in favour of international intermediaries. Nicole Kempis and Ivy Mwai pushed for deeper investment in Indigenous knowledge systems and community-driven models of resilience. Ivy Mwai underscored that “the people closest to the problem are also closest to the solution,” reinforcing the idea that funding must be grounded in lived realities. Youth were highlighted as not only central beneficiaries but strategic co-creators of climate solutions. Programmes like “Young Africa Works” illustrate how youth-led interventions address systemic gaps across education, mental health, and employment. Dr. Amanfo added that creating equitable access to resources means making room for all to climb: “Some are born on anthills and can see farther; others must climb.”

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Day Two: Africa's Climate Dynamics: Research and Pedagogies

Keynote Session

The second day of the conference opened with a keynote session focused on reimagining Africa's leadership in climate action through inclusive research partnerships, policy co-creation, and youth empowerment. Speakers emphasised the need to move beyond extractive collaboration models, advocating for equitable knowledge production and sustained investment in African-led solutions. Themes of sovereignty, energy justice, and intergenerational equity shaped the discussions, setting a visionary tone for the conference's final day. This session built on the foundation laid on Day One, offering both strategic direction and practical reflections for operationalising Africa's climate future.

Speakers included:

- **Prof. Mathieu Thierry Ngosso** - University of St. Gallen
- **Prof. Jamie Cross** – University of Glasgow

Prof. Jamie Cross's keynote presentation reframed the conference themes around the concept of "thermodynamics". It highlighted the global cold chain system as an essential yet often overlooked component of food and agricultural logistics. He introduced the dual framework of passive and mechanical cooling systems, stressing the need to transition toward renewable-based, passive cooling alternatives. While mechanical systems are heavily reliant on electricity and often carbon-intensive, passive systems, rooted in traditional cooling practices, are increasingly being scaled up, particularly in rural African settings where energy infrastructure is limited. Prof Cross emphasised the urgency of decarbonising cold chains globally and pointed to Africa's paradox. Although the continent has limited cooling systems, it plays a significant role in global heat redistribution due to climatic vulnerability and infrastructural deficits. He framed cold chains not merely as technical or industrial challenges but as justice and sustainability issues, calling for innovation in renewable energy to safeguard food systems, livelihoods, and climate resilience.

Prof. Mathieu Thierry Ngosso delivered a deeply philosophical keynote on the ontological dimensions of sustainability in Africa. He presented two contrasting paradigms: "sustainable development", a dominant, linear, control-oriented model driven by global metrics and "developing sustainably," a collective, relational, and African-centred approach rooted in values such as liberation, Ubuntu, and plural rationalities. He critiqued the dominance of top-down sustainability frameworks that often neglect the agency and voices of communities most affected by the climate crisis. Ngosso argued that sustainability must be co-constructed with those on the frontlines of climate vulnerability. Citing the LAPSSET project, he warned against technical mega-projects that mask structural inequalities and exacerbate displacement. Instead, he advocated a paradigm shift from "one-size-fits-all" approaches to "an all-paradigm approach" that centres equity, contextual understanding, and community co-leadership.

Key Discussion Points:

- Cold chains are critical in transporting food and agricultural products under controlled temperatures.
- Two main types of cold chains: passive systems (traditional, non-electric) and mechanical systems (energy-intensive).

- Decarbonising cooling systems is essential for climate and food security, particularly in Africa.
- There is a need to scale passive cooling technologies in rural and energy-poor settings.
- Sustainability in Africa must be reimagined from within, moving away from externally imposed, linear development models.
- A call to shift from extractive collaborations to co-created knowledge partnerships prioritising African agency.
- Reframing sustainability through an ontological lens that respects collective values and alternative logics of well-being.

Knowledge Systems and Epistemic Communities.

Following the keynote address that opened **Day Two**, the conference shifted its focus to the theme of **Knowledge Systems and Epistemic Communities**. This cluster of panel discussions examined the plural ways in which knowledge is produced, legitimised, and mobilised in response to climate change across the African continent. Sessions under this theme explored how indigenous, local, and scientific knowledge systems interact sometimes in tension, sometimes in convergence and how these epistemic communities shape policy, practice, and resilience-building. At the heart of these conversations was a call to recognise epistemic justice as central to climate justice, and to reimagine adaptation through frameworks that honour multiple ways of knowing.

Panel 1: Just Transition and Dilemmas of Net-Zero Carbon

This panel unpacked the competing interpretations of 'just transition' within African development contexts, highlighting its contested nature across different geographies, sectors, and actors. Discussions revealed that while the language of 'just transition' is globally widespread, its meaning and implications are highly context-specific.

Speakers included:

- **Camilla Houelland** – Justice in Energy Transition: Nigerian Oil Workers' Experiences and Perspectives
- **Tokunbo Olorundami** – Energy Transition in Nigeria: Investigating the Socio-Political and Economic Inhibitions to a Just Transition
- **Yanis Rihi** – Just Transition(s): Continuity or Break with the Sustainable Development Paradigm?
- **Verena Luise Baumüller & Ngogo Mang'enyi Ngogo** – The Green Energy Transition: Dilemmas and Prospects in Northern Uganda
- **Katrina Lehmann-Grube** – Social Protection for a Just Transition in South Africa

Speakers drew from many empirical contexts to explore how just transition frameworks must be rooted in local realities. Camilla Houelland highlighted the mixed feelings of oil workers toward the energy transition, where some feared losing their livelihoods while others drew attention to the sector's environmental and health impacts. Tokunbo Olorundami's presentation revealed that although Nigeria has committed to net-zero by 2050, only two states currently have energy transition plans. Despite high potential for renewables like solar and wind, deep-rooted cultural practices, elite capture, and political inertia remain significant barriers. Yanis Rihi questioned whether the 'just transition' is a new paradigm or a repackaged version of failed sustainable development models. He stressed the need to rethink transition through alternative imaginaries that embrace African epistemologies. Baumüller and Ngogo reported that charcoal remains the dominant energy source in Uganda due to affordability and lack

of alternatives. In contrast, an unlegislated 2023 charcoal ban led to vigilante enforcement and public distrust. In South Africa, Lehmann-Grube addressed the inadequacy of social protection systems, arguing for a transformative approach that protects displaced workers and proactively supports inclusive economic renewal.

Key Discussion Points:

- Workers' perspectives must shape what justice means in energy transition debates.
- Nigeria's transition faces socio-political, economic, and cultural obstacles.
- There is a need to decolonise and decarbonise education to support behavioural shifts.
- Biomass remains central in Uganda, and top-down bans can exacerbate informality and exploitation.
- Social protection in South Africa is broad but lacks comprehensive coverage. New frameworks are needed to prevent exclusion.
- The 'just transition' concept risks becoming another elite discourse unless operationalised from below.
- A discussion arose on the elitism of energy access in Nigeria, where only the affluent can afford solar technologies.

Panel 2: Post-Carbon Artefacts, Aesthetics and Popular Culture

This panel pushed the boundaries of traditional climate discourse by centring culture as a site of analysis and action. It showed how art, aesthetics, and popular culture are not peripheral to climate politics but are central to how communities make sense of environmental change, contest injustice, and build alternative imaginaries. Participants called for increased support for artists and cultural practitioners as co-authors of Africa's post-carbon futures, emphasising the value of creativity in bridging technical knowledge and lived experience. The panel foregrounded the cultural and symbolic dimensions of environmental change. This panel foregrounded the cultural and symbolic dimensions of ecological change, examining how artistic practices, storytelling, media, and every day aesthetics inform public understanding and resistance to African post-carbon transitions.

Key Discussion Points:

- Environmental change is scientific, political, and deeply cultural and symbolic.
- Popular culture, including music, fashion, visual art, and film, articulates climate concerns, identities, and future imaginaries.
- Artistic and cultural expressions offer an alternative language to communicate complexity, challenge dominant narratives, and make climate discourse more accessible.
- Post-carbon artefacts reflect memory and aspiration, capturing histories of extraction, displacement, and resistance, while imagining more just and sustainable futures.
- The aesthetics of climate activism and environmental justice can catalyse broader societal engagement by connecting emotional, affective, and material dimensions of ecological change.
- Several participants reflected on how art and symbolism can provoke deeper emotional engagement with climate issues compared to technical or policy discourses.

- Others asked how cultural workers and creatives can be more systematically integrated into climate policy design and public education.
- Discussions also highlighted the dangers of aestheticising suffering without a political commitment, urging the need for ethical, grounded, and community-centred creative climate engagements.

Panel 4: Geographies of Resistance

This panel critically interrogated how climate resilience and ecological transition frameworks intersect with legacies of colonialism, global inequality, and contested sovereignties in African contexts. Through empirically rich case studies in Ghana and the Democratic Republic of Congo, speakers challenged dominant development discourses. They highlighted the everyday strategies through which communities resist, reinterpret, and reassert control over their environments in the Anthropocene.

Speakers included:

- **Clement Amponsah** – Decolonising Resilience in the Anthropocene: Rethinking Discourses of Environmental Injustices and Resistance in Northern Ghana
- **Célia Carlier** – Environmental Sovereignty in Shinkolobwe: When Local Dynamics in the Democratic Republic of Congo Raise Questions About the Hegemonic Conception of Ecological Transition

Clement Amponsah's presentation offered a powerful critique of donor-driven climate resilience programmes in Northern Ghana, particularly the IRCCNG project implemented in the Bongo District. He argued that such interventions, while framed as participatory and bottom-up, continue to reproduce colonial hierarchies by privileging technocratic expertise over community knowledge. The notion of resilience, Amponsah suggested, is often mobilised in post-political ways that erase histories of structural marginalisation and environmental injustice. Drawing on ethnographic fieldwork, he described how local farmers resisted imposed adaptation agendas not only by abandoning donor-built infrastructure but by actively challenging design processes and proposing alternative models rooted in local needs. These acts of resistance reveal a counter-systemic agency that exposes the limitations of superficial inclusion and calls for a deeper decolonial reimagining of climate adaptation.

Célia Carlier's contribution reframed the ecological transition through the lens of environmental sovereignty in Shinkolobwe, Democratic Republic of Congo, a site historically tied to uranium extraction for the atomic bomb. Her analysis foregrounded metaphysical relationships with land, ancestors, and spirits, illuminating an Indigenous environmental ethic based on reverence, reciprocity, and spiritual obligation. Carlier critiqued the securitisation and commodification of green transitions, which treat Africa as a 'solution continent' while perpetuating extractive dynamics. She argued that contemporary energy and mineral transitions risk reproducing colonial epistemologies unless grounded in local cosmovisions. Environmental sovereignty, as she proposed it, involves reclaiming authority over both ecological knowledge and territory, situating land not as a resource but as a site of cultural, spiritual, and political life.

Key Discussion Points:

- The dominant framing of resilience and green transitions often depoliticises climate governance and reinforces colonial continuities.
- Donor logics, financing protocols, and perceptions of local incapacity often constrain technocratic participation, which is usually framed as bottom-up.
- Resistance in rural Ghana reveals how communities mobilise agency by challenging project design, withdrawing cooperation, and reclaiming infrastructure.
- Local cosmologies in Shinkolobwe conceptualise environmental relations through ancestral, spiritual, and ethical frameworks, challenging extractivist logics.
- Environmental sovereignty offers a critical alternative to externally imposed transition frameworks, emphasising the political, metaphysical, and relational dimensions of land.
- Both presentations highlighted the urgency of decolonising climate adaptation and ecological transition discourses by recognising epistemic diversity, historical memory, and structural justice.

Justice, Power, and Possibility in Energy Futures

The afternoon's parallel sessions focused on a cluster of presentations centred around the theme of Justice, Power and Possibilities in Energy Futures.

Panel 1: Technologies, Politics, and Poetics of Green Infrastructure

This panel explored how technological innovation, energy transitions, and infrastructure development shape pathways for economic inclusion, environmental justice, and political contestation in Africa. The session brought together two presentations that interrogated green job creation and the socio-political complexities of geothermal energy development.

Speakers & Presentations:

- **Paul Mukoki** – Green Jobs, Technologies, and Infrastructure: Paving the Way for Sustainable Development in Africa
- **Kevin Donovan** – The Depths of the Clean State: Geothermal Energy in Kenya

This session featured two compelling presentations examining how Africa's green transition intersects with employment, land politics, and historical patterns of exclusion. Paul Mukoki mapped the potential of green jobs in renewable energy, agriculture, and infrastructure. Kevin Donovan employed the lens of political ecology to examine how geothermal energy development in Kenya perpetuates patterns of dispossession and marginalisation, particularly among the Maasai communities.

Key Discussion Points:

- Africa could generate over 100 million green jobs by 2050, including 3.3 million by 2030, with solar PV, hydropower, and climate-smart agriculture leading the way.
- Job distribution is uneven: 40% require no formal education, 30% need vocational skills, and 10% demand higher education, calling for investment in STEM and vocational training.

- Successful models, such as South Africa's REIPPPP and Kenya's Farmer Support Enterprise, demonstrate that policy-driven investment can scale climate-resilient employment.
- Donovan's work situated geothermal energy in Kenya within longer histories of colonial land grabs and state-led displacement. Projects like Olkaria have displaced Maasai families and disrupted sacred landscapes.
- Geothermal's 'clean' image is complicated by uneven access to electricity, ecosystem disruption, and lack of community benefit-sharing.
- Maasai concepts of well-being (nishan) clash with state narratives of progress (maendeleo), highlighting cultural dissonance and the politics of representation.
- Greenwashing and elite capture were discussed as risks, particularly when foreign-funded projects fail to benefit local populations.
- The Adani investment scandal underscored public concern over governance and transparency in large-scale energy deals.
- Participants raised concerns about the invisibility of geothermal plants, symbolic politics of infrastructure, and ethnic inequalities in job allocation.
- Donovan noted that foreign-trained engineers form a technocratic elite, often alienated from local concerns, reinforcing exclusionary development models.

Cross-Cutting Themes:

- Justice, governance, and transparency are critical to a truly inclusive green transition.
- Geothermal energy is not free from harm; it can reproduce spatial and cultural violence unless designed with local consent and accountability.
- Narratives of sustainability must attend to whose futures are prioritised and whose lands are sacrificed.
- The session called for green job strategies that combine skills training, infrastructure investment, and equitable distribution of benefits.

Outcomes and Recommendations:

- Integrate green job creation into national climate and development plans, ensuring a clear link between infrastructure, skills, and equity.
- Localise green technologies through policy support for African manufacturing and innovation ecosystems.
- Ensure that energy projects respect Indigenous land rights and cultural values, with mechanisms for inclusive benefit-sharing.
- Strengthen governance structures to avoid corruption and ensure transparency in energy and infrastructure investment.
- Advance comparative research on how different energy technologies shape local livelihoods, spatial politics, and power relations.

Panel 2: Women and the Gendered Intersections of Climate and Energy

This panel explored how gender shapes experiences of, and responses to, climate change and energy transitions across Africa. It foregrounded women's roles, risks, and resistances in navigating climate precarity, while critically examining how energy access, use, and governance are deeply gendered.

Speakers & Presentations:

- **Mariachiara Boldrini** – Women as Survival Scientists Adapting to Climate Change in Rural Ghana: How NGOs Define Their Spaces of Agency by Navigating the Stakeholders Arena
- **Fred Kasalirwe** – Socio-Cultural Factors, Indoor Air Pollution and Economic Well-being among Rural Ugandan Women

This session featured two compelling presentations exploring how women's identities, roles, and vulnerabilities intersect with environmental and energy challenges in rural Africa. Mariachiara Boldrini's work in Ghana employed a feminist political ecology lens to reframe rural women as "survival scientists" who adapt to climate threats within socially constructed roles. While NGOs provide critical support, their effectiveness is constrained by structural inequalities and the absence of state interventions. Boldrini called for collective empowerment that transforms, rather than adapts to, existing hierarchies. Fred Kasalirwe, a WESAF Fellow from Uganda, examined the gendered politics of household energy use and indoor air pollution. His presentation challenged assumptions about clean energy transitions, noting that cultural norms and household power dynamics often prevent women from adopting clean technologies, even when they are aware of the associated health risks. He argued that interventions must go beyond technical fixes to include behavioural insights and sociocultural realities.

Key Discussion Points:

- Climate change is often framed as a technical issue, excluding its gendered and political dimensions.
- Rural Ghanaian women bear a "dual burden" of heightened climate vulnerability and the expectation to lead adaptation.
- Feminist political ecology challenges essentialist narratives and foregrounds socially constructed roles in shaping environmental agency.
- NGOs support women's adaptation efforts but remain limited by broader structural inequalities and minimal state presence.
- Cross-cutting issues: Gender equity, intersectionality, Indigenous knowledge, governance, NGO limitations.
- Cooking in Uganda is a culturally embedded practice; firewood use symbolises tradition, identity, and perceived food quality.
- Household energy decisions are deeply gendered, while men hold authority, women suffer the consequences of indoor air pollution.
- Cultural beliefs, economic limitations, and spousal dynamics hinder the adoption of clean energy.
- Cross-cutting issues: Gender inequality, health impacts, economic survival, cultural knowledge, and technology adaptation challenges.

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- Participants challenged the generalisation that “women are always first impacted,” prompting clarifications about pre-existing gendered roles and vulnerabilities.
- A question about urban versus rural differences revealed the need for further comparative research.
- Discussions probed the internalised norms and agency of women in maintaining traditional cooking practices.
- Participants cautioned against portraying women solely as victims and emphasised the diversity of African gender contexts.
- Historical failures, such as solar ovens, were discussed as critical lessons for current and future interventions.

Panel 3: Shifting Spatialities and Contentions around Energy Justice

This panel examined Africa’s evolving geographies and contested terrains of energy justice. It examined how access to energy, infrastructure development, and transition policies is experienced unevenly across space, shaped by class, location, race, and historical legacies of marginalisation.

Speakers & Presentations:

- **William Otchere-Darko** – De-provincialising Energyscapes: Conceptualising from Energy Landscapes in Africa
- **Mohamed Jaouad Malzi** – Unveiling Moroccan Perspectives on the EU-Morocco Green Partnership: Assessing Its Potential for a Sustainable Future
- **Menka Vansant** – A Just Transition? Conflicts Between Small-scale Fishers and Energy Development in the Northern Cape

This session brought together a multidisciplinary group of scholars to interrogate how energy access, governance, and transitions are contested across African spatial and political scales. William Otchere-Darko challenged dominant Western framings of energy development, urging for African-centred conceptualisations of energyscapes that reflect lived realities. Mohamed Jaouad Malzi examined the EU-Morocco Green Partnership, questioning how international green deals interact with national priorities and local sustainability. Menka Vansant’s presentation shed light on South Africa’s Northern Cape, where small-scale fishers face exclusion and displacement from energy megaprojects, raising critical questions about environmental justice and governance. The panel reaffirmed that energy transitions are not neutral or purely technical undertakings. Instead, they are deeply embedded in power relations, contested geographies, and historical injustices. For energy transitions to be, they must be co-produced with local communities, respect diverse knowledge systems, and challenge inherited patterns of marginalisation.

Key Discussion Points:

- Energy transitions must centre local contexts and community knowledge systems.
- The EU-Morocco Green Partnership presents opportunities for decarbonisation but raises sovereignty and equity concerns.
- Large-scale energy infrastructure in South Africa has displaced and marginalised small-scale fishers, prompting calls for more just energy governance.
- Structural constraints, local innovation, and adaptive capacity shape Zimbabwe’s transition to green technology.
- Cross-cutting themes included Indigenous knowledge, marginality, socio-technical justice, and equity in energy transitions

- Questions revolved around how policymakers can incorporate community resilience, decentralised planning, and local innovation into national energy frameworks.

Open Forum: Teaching Climate Change in Africa

The conference concluded with an open dialogue on teaching climate change in Africa. This forum created a dynamic space for educators, students, and community organisers to collectively reimagine climate pedagogy. Discussions underscored the need to move beyond rote learning and externally imposed models, instead calling for curricula that centre African knowledge systems, political ecologies, and grassroots adaptation practices.

Participants articulated the structural barriers to decolonising climate education, such as language hegemony, funding inequities, and elite institutions' gatekeeping of curricula. They offered a radical critique of traditional academic hierarchies and proposed a transformative, participatory, and emancipatory vision of climate justice education.

Student contributors emphasised the legitimacy of lived experience as a form of expertise and advocated for participatory curriculum development processes that are inclusive and grounded in local contexts. Several participants powerfully asserted that "Africa must be taught by Africans," emphasising the importance of cultural autonomy, epistemic justice, and knowledge systems rooted in African realities. The session closed with a broad consensus that climate education on the continent must be politically engaged, globally connected, and capable of equipping future generations with the tools to lead Africa's climate transformation.

Key Discussion Points:

- There is an urgent need to decolonise climate education by embedding African epistemologies, case studies, and languages.
- Many African climate change curricula are imported wholesale from the Global North, limiting contextual relevance.
- There is a disconnect between climate science education and the lived experiences of African communities.
- Pedagogy should transfer knowledge and cultivate critical thinking, political consciousness, and civic engagement.
- A pan-African climate curriculum must reflect Indigenous knowledge, environmental histories, and social movements.
- Cross-cutting themes: Accessibility, linguistic inclusion, anti-racism, interdisciplinarity, and academic hierarchies.
- Participants raised the challenge of access to climate education in rural schools and informal learning settings.
- Youth activists shared perspectives on non-formal climate learning via art, storytelling, and community organising.
- Educators discussed the need for new partnerships between universities and local communities.
- Several contributors affirmed that "Africa must be taught by Africans," highlighting the need for epistemic sovereignty and locally anchored pedagogies.

Concluding remarks

The Climate Dynamics in Post-Carbon Africa conference concluded with a powerful and timely assertion: Africa is not on the periphery of global climate politics; it is a central terrain on which the struggles, contradictions, and possibilities of a just climate future are being lived, negotiated, and reimagined. Over two days, the conference brought together a transdisciplinary constellation of researchers, activists, artists, funders, policymakers, and community leaders to interrogate how climate transitions unfold across the African continent and how they must be reconfigured to reflect African priorities, knowledges, and historical realities.

A key insight from the conference was the urgent need to **decolonise climate governance and knowledge production**. Across panels, speakers exposed how global climate imperatives such as net-zero targets, Nationally Determined Contributions (NDCs), or climate finance frameworks often assume universal applicability while obscuring the deeply uneven histories and power relations that shape African engagement. As one speaker noted, “Global climate frameworks talk of decarbonisation, but they rarely talk of decolonisation.” This sentiment echoed throughout sessions on Indigenous knowledge, environmental sovereignty, and just energy transitions.

The conference also shed light on the **structural failures of global climate finance**. The African Development Bank estimates that \$133 billion is needed annually for mitigation and adaptation; yet, in 2023, Africa received less than \$20 billion, representing barely 4% of global flows. Climate finance was framed not as a neutral technocratic tool but as a contested terrain where questions of equity, access, and sovereignty collide. Participants described how funding often flows through international intermediaries, bypassing local actors and reinforcing historical patterns of dependency. In multiple sessions, speakers called for a rethinking of climate finance as a reparative mechanism for justice, not just an investment opportunity. “Unlocking capital is not enough,” one panellist observed. “We need to redistribute power.” These tensions are not accidental but symptomatic of a global climate architecture that remains structurally unequal, despite the language of “common but differentiated responsibilities.”

Crucially, the conference foregrounded **African epistemologies and cultural frameworks** as essential to climate futures. In the Indigenous Knowledge and Community Voices panel, participants from East Africa described how pastoralist communities use the movement of stars, intestinal haruspicy, and tree flowering cycles to forecast weather and drought. These are not superstitions but sophisticated, empirically grounded systems of anticipation and response. Yet such knowledge is consistently marginalised by formal early warning systems. The IPCC’s repeated call for “integrated knowledge systems” will remain rhetorical unless these ways of knowing are politically and institutionally recognised, not merely incorporated or translated into Western categories, but supported on their terms.

The politics of **resistance and refusal** also played a prominent role. In Northern Ghana, local farmers resisted donor-led “resilience” interventions that excluded them from planning and failed to align with their needs. Rather than accept technocratic adaptation measures, they reclaimed agency by boycotting project launches, abandoning poorly designed infrastructure, and repairing their systems. In Shinkolobwe, DRC, where uranium was mined for the Hiroshima bomb, local cosmologies emphasise spiritual and ancestral obligations to land. These metaphysical worldviews challenge green extractivism justified in the name of the “global ecological transition.” As the EU, US, and China accelerate critical mineral sourcing for green technologies, Africa must not become a new sacrifice zone in the name of global decarbonisation.

The conference also redefined **climate leadership and participation**. Women were not framed as mere victims of climate change but as “survival scientists,” a term used to honour rural women’s adaptive intelligence in

managing water, food, and energy crises. Youth were not positioned as leaders of tomorrow, but as protagonists of today's climate innovations. Cultural practitioners, including artists, designers, and storytellers, were recognised as critical climate actors, using aesthetics to bridge science and emotion, memory and resistance.

Moreover, the event contextualised Africa's climate position within **global climate negotiations**. At COP28 and beyond, African negotiators have called for operationalising the Loss and Damage Fund, scaling concessional finance, and recognising the Congo Basin as a global carbon sink. Yet such proposals often face resistance in multilateral spaces dominated by the Global North. This conference reinforced that evidence-based African scholarship, institutional solidarity, and grassroots movements must converge to assert the continent's priorities with clarity and force. As one panellist put it: "Africa does not need a seat at the table if the table is already broken. We need to build our own."

A recurring thread was the rejection of "transition" as a purely technical or managerial process. Instead, transitions were understood as **deeply social, cultural, and ontological in nature**. Professor Mathieu Thierry Ngosso's keynote offered a powerful provocation: sustainability must move beyond metrics and models, toward collective ethics of Ubuntu, liberation, and ecological care. His critique of the linear "sustainable development" paradigm underscored those African futures cannot be engineered; they must be co-created through justice, memory, and meaning.

In sum, the Climate Dynamics in Post-Carbon Africa conference was not merely a documentation of challenges; it was a **rehearsal for possibility**. It affirmed that Africa's climate future must be imagined, theorised, and built from within by those who live its complexities, dream its alternatives, and demand its justice. The work ahead is monumental. But as this conference showed, Africa is not waiting for permission. It is already leading on its terms.

