

IMPLICATIONS OF THE ENERGY TRANSITION ON AFRICAN ECONOMIES

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Session 13: Equitable transitions
from an, economic, finance,
emissions, trade, jobs
perspectives

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Panel Discussion

Moderator: Xolisa Ngwadla

Respondent: Prof. Fadhel Kaboub

Panelists:

Mr. Abhijit Das - Independent Expert

Mr. Anton Cartwright - Econologic

Dr. Thapelo Letete - Zutari

Dr. Stanley Semelane - Independent Expert

Dr. Chantal Naidoo - Rabia Transitions

Work Packages

JT Framework

Xolisa Ngwadla

Defining a Just Transition Framework from an African perspective

Trade

Abhijit Das

What are the implications of the transition to low carbon economies, including green technologies on trade for African economies?

Economy

Anton Cartwright

What are the economic implications of a just climate transition at the continental scale; agriculture and forestry, rare earth minerals, and natural gas?

Emissions

Thapelo Letete

What are equitable pathways for the transition of African economies towards a low carbon future; sources and sinks?

Jobs

Stanley Semelane

What are the implications of energy transition on jobs and employment; technologies, and pathways?

Finance

Chantal Naidoo

What will it take to finance the transition in an equitable manner; access, instruments, principles?

Approach to the discussion

Key Facts

Characterisation of the status quo and dynamics for each of the elements considered in the study

Response Options

Implications for African countries in the context of high or low ambition by the global community vs Africa

Key Messages

Potential policy positions/perspectives by African countries including a response to the scenarios

What are your perspectives on the options and policy perspectives

Just Transition Framework

Key Facts

- There is no consensus on what the Just Transition mean for African countries, which limits the engagement in the policy discussion and implementation
- Decision 1/CMA.4 establishes a work programme on the Just Transition in line with pathways to achieving the goals of the Paris Agreement outlined in Article 2

Response Options

- **Low carbon development pathways** - pursuit of net-zero emissions by mid-century; fossil fuel phaseout >> differentiated pathways for developed and developing countries
- **Climate resilient pathways** - reducing climate risks in the context of temperature scenarios based on GGA targets >> protection of livelihoods and natural resource dependent economic sectors
- **Finance pathways** - equitable access to finance >> financial instruments that do not deepen indebtedness; financial architecture that promotes shared economic growth; needs-based financing of climate action

Key Messages

- The pathways should be considered in the context of their implications on sustainable development, and the legitimate right of African countries to development
- The African response should be based on understanding the implications of the transition on the economy, trade, socio-economic development including jobs
- The transition must be assessed through equity lenses, such as restorative justice - how are the responsibilities shared, distributive justice - ability of Africa to achieve development objectives; procedural - how the multilateral system employs fair tools and instruments

Trade Perspectives

Key Facts

- Over the past four decades, per capita energy consumption in Africa has stagnated between 14-15 gigajoules/person, the lowest in the world.
- Fossil fuels accounting for almost 90% of primary energy consumption in Africa, the second highest after Middle-East, the transition to renewable energy wide implications for the continent
- The share of fossil fuel products in overall export basket exceeds 40% for countries in Central, Western and Northern Africa, whereas these do not constitute a significant share for Eastern and Southern Africa.
- In respect of 18 countries, the contribution of earnings from exports of fossil fuels to the total foreign exchange reserves exceeded 25% for at least one year during the period 2017-2022.
- EU Deforestation Regulations identified commodities should not contribute to deforestation and forest degradation in the EU and elsewhere in the world: cattle, cocoa, coffee, oil palm, rubber, soya, and wood. A number of African countries have their total foreign exchange reserves exceeding 15% in at least one year during the period 2017-2022.
- In the period 2012-2017, based on the OECD Statistical Database 90,762 patents were filed by applicants from OECD countries out of 105,110 patent applications worldwide (86.35%). The implication for Africa is the need for importing environment-related technologies for the transition to low carbon emission economies.
- Various inter-governmental organisations are discussing rules to support low carbon transition; lowering/eliminating customs duties on environmental products; mandating that countries adopt high standards of environmental protection and mining; harmonising product standards, non-discriminatory treatment in government procurement of products and equipment relevant for renewable energy, etc.

Trade Perspectives

The transition to a low carbon emission economy poses triple challenges for Africa – need to significantly enhance energy access for households, agriculture and industry; preventing economic, political and social disruptions that may be caused by premature shutting down of fossil fuel power plants and fossil fuelled transport; and severe pressure on foreign exchange to facilitate the energy transition being based on imported products and technologies.

Some of the environment-related measures being implemented/proposed to be implemented by some countries outside Africa could further erode the existing low level of foreign exchange in Africa, thereby constraining Africa from importing advanced technologies for promoting its green transition.

Most of the technologies that are relevant for green transition are patent protected and originate in the developed countries. Africa is not likely to be able to have the foreign exchange from its existing exports to pay for the imports of green technologies and green products, which can facilitate its transition to a low carbon emission economy. Alternate sources of funding/foreign exchange would need to be explored for this transition.

Some of the trade-based technical solutions being discussed at inter-governmental platforms could exacerbate energy scarcity in Africa, leading to adverse impacts on economic productivity and social and political stability.

Just Transition must include the following two fundamental tenets: gains from trade-related mitigation measures should be distributed more evenly among countries, and not remain concentrated in a handful of countries; and developing countries must be allowed to preserve policy space so that the transition to renewable energy does not make Africa overwhelmingly dependent on imports.

Economy Perspectives

Key Facts

- A just transition requires African countries to take advantage of those SDGs that require an advance of economic activity e.g. “decent work and economic growth”, universal access to clean energy, more food and sanitation (SDGs 1-4, 8 & 9), while insisting that high income countries take responsibility for the global scaling back implicit in the other SDGs, e.g. lowering GHG emissions, responsible consumption, restoring fish stocks and ending deforestation (SDGs 12-15).
- Most African economies are currently small and open, and are susceptible to unjust transitions when it comes to decarbonisation, border adjustment measures or green climate finance. This could be reversed if African countries can package their low-carbon development as a global climate priority.
- The continent’s current electricity deficits cost African countries an estimated US\$3.02 billion in 2019 and were responsible for the premature deaths of an estimated 1.1 million people, half of them children under the age of five, from indoor and outdoor air pollution (Fisher et al., 2021).
- African countries seeking to address electricity deficits can harness innovations in renewable energy that have caused an 85% drop in the price of photovoltaic electricity and a 70% drop in the price of onshore wind between 2010 and 2020; digitalised payment systems that have improved tariff setting and enabled revenue collection, and proliferation of mini-grids and smart grids capable of integrating multiple sources of electricity.
- The urbanisation of Africa’s population has concentrated demand for household building material and services. This offers a novel opportunity for African countries to advance climate resilient manufacturing and industrialisation by developing low-carbon regional value chains that meet this demand.
- African countries can secure global recognition for the value of their carbon sinks (forest, soil carbon, peatlands) many of which are still in-tact on the African continent.

Economy Perspectives

Key Messages

- The viability of a just energy transition in Africa depends on the climate ambition in high income countries (see table). Viability would be supported by full cost accounting of global energy options, finance and technology transfers, compensation for not exploiting hydro-carbon resources in the pursuit of universal access to electricity
- African countries have an opportunity to exploit a suite of global shifts, particularly technological progress that enables a shift away from large, long-lived sunk investments in power generation
- ‘Climate resilient development’ offers African countries a viable (possibly the only) pathway to middle-income status and global competitiveness. The goal for African countries is competitive advantage and employment creation in a low-carbon global economy.

Africa

	Low	High
Global	<p>[Scenario 1] Disastrous scenario from finance and trade perspectives from tariffs, standards and taxes; positive environmental benefits; New jobs in low-carbon value chains and in restoration of environmental sinks.</p>	<p>[Scenario 2] Unlock new finance and technology in the investment in energy infrastructure; positive environmental benefits particularly with a high global response; New jobs in low-carbon value chains and in restoration of environmental sinks.</p>
	<p>[Scenario 3] Short-term wins on exploring O&G; environmental destruction and degradation of economic base; people move to where there are opportunities, i.e. current trade dominant countries.</p>	<p>[Scenario 4] Competitive advantage in certain segments in the long run; struggle for finance; environmental destruction; cannot monetise environmental benefits to trade partners</p>

Emissions Perspectives

Key Facts

- Since 1990 Africa's emissions have grown by 59% from about 2,928 MtCO₂e to about 4,640 MtCO₂e in 2020.
- This change corresponds to a 1.1% increase in the continent's contribution to global annual emissions, from about 7.7% in 1990 to about 8.8% in 2020.
- If the emission trends of the past 30 years (1990 – 2020) are to continue for the next 30 years, it is expected that Africa's emissions will increase by a further 59% compared to 1990, reaching 6,353 MtCO₂e by 2050, and increasing the continent's annual emissions contribution to about 10%.
- Figure 1 shows that the highest annual contributors to Africa's GHG emissions are the LULUCF and Energy sectors with contributions ranging between 30% and 40% each year, followed by Agriculture which contributes about 23% annually.

- Disaggregation of Africa's Energy Sector emissions (Figure 2 below) shows that Electricity generation, Transportation and fugitive emissions are the largest contributors to energy sector emissions at 35%, 22% and 20% contribution respectively.

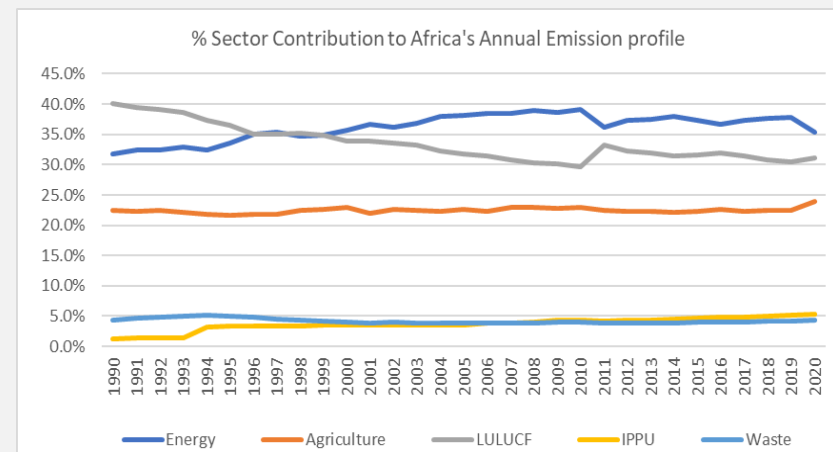


Fig 1: % Sector contribution to Africa's Annual emission profile

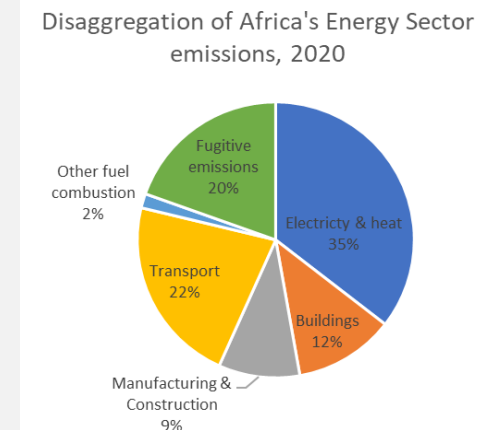


Fig 2: Disaggregation of Africa's Energy sector emissions in 2020

Emissions Perspectives

Key Messages

- Africa being a low contributor to global emissions, an ambitious mitigation effort would not have significant impact changes in the climate system if the global community lacks ambition
- Africa's main challenge is provision of modern energy and sustainable food to support economic development and social well-being. The continent's just transition will need to adequately address both challenges.
- While there is often a link between the energy sector and the Agriculture, Forestry and Land Use sectors (AFOLU) in Africa, equating Africa's Just Transition to only the "Just Energy Transition" (JET) is not accurate, and can potentially underplay the importance of non-energy emission sources in Africa's Just Transition.
- For Africa, reducing emissions from deforestation and land degradation, restoring forests and implementing smart agriculture interventions are just as important to the continent's just transition as deployment of low emission fuels and energy technologies.
- Africa is rich in carbon sinks which can assist in the continent's just transition and also present an opportunity for Africa in carbon markets, where Africa can supply global markets with the goods and services for low-carbon economies.

Jobs Perspective

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- Increased investment in **renewable energy** technologies, can lead to job creation in Africa, in construction, maintenance, manufacturing of equipment, and research and development; however, such opportunities in the global south have been limited to construction, e.g., 10% of direct jobs created by the South African renewable energy sector.
- As demand for renewable energy technologies increases, opportunities for local **manufacturing and value chains** of solar panels, wind turbines, and other components can foster economic growth and job creation, contingent on local content policies
- Efforts to improve **energy efficiency** in buildings, industries, and transportation can generate jobs in areas such as energy auditing, retrofitting, and the production of energy-efficient appliances.
- Mitigation efforts often involve building and upgrading **infrastructure**, such as public transportation systems, energy-efficient buildings, and sustainable urban planning which can generate jobs in construction, engineering, architecture, and related sectors that benefit from indirect jobs
- Some mitigation measures might focus on **sustainable land use and reforestation**, which can create employment opportunities in sectors like agroforestry, sustainable agriculture, and ecosystem restoration.
- The energy transition requires **innovation in technology**, policy, and business models. This can lead to job opportunities in research, development, and innovation hubs focused on clean energy solutions.

Jobs Perspectives

- **Investment and Infrastructure:** While the energy transition presents opportunities, it also requires significant investment in infrastructure and technology. There, without proper funding and planning, the potential for job creation may be limited.
- **Transition for Fossil Fuel Workers:** Many African countries still rely on fossil fuels for energy generation, of which the transition can lead to job displacement for workers in sectors like coal and oil.
- **Export Demand:** Mitigation efforts in the global north are likely to result in reduced consumption of goods and services that are carbon intensive, hence job losses for countries heavily reliant on exporting coal and oil will be confronted with economic challenges
- **Competitive Pressure:** As global markets transition to cleaner technologies, African industries that do not adapt quickly enough might face increased competition from more environmentally friendly products and services, potentially affecting job stability in these sectors.
- **Industrialisation interruption:** Some climate mitigation technologies and strategies could place additional demand on certain resources, potentially leading to increased raw material resource exports and scarcity which may affect the African continent's industrialisation opportunities.
- **Economic Dependency:** African countries might become dependent on technology, funding, and expertise from the global North to implement climate mitigation measures, which could limit their agency and control over their own development.

Jobs Perspectives

- **Equity and Inclusion:** Ensuring that the benefits of the energy transition are accessible to all countries and segments of society, including underdeveloped countries/ marginalised communities and rural areas, is it crucial ensure equitable project development and job creation.
- **Policy Support:** Clear and supportive policies are essential to drive investments in renewable energy and create an enabling environment for job growth, considering regional initiatives to increase innovation and production economies of scale.
- **Private Sector Engagement:** Collaboration between governments and the private sector can lead to innovative business models that create jobs while advancing the energy transition.
- **Potential opportunities:** Abundant and inexhaustible wind and solar energy resources as well as battery development raw material
- Strategic global competitive advantage (excellent resource and available land)
- New jobs in gas, storage and renewables and other value chain manufacturing can be achieved.
- Inclusive and transparent planning can able a mutually beneficial energy transition.

Finance Perspectives

Key Facts

- **Financing commitments supporting energy transition in Africa are insufficient for its needs**, which are around USD 70 billion between 2020 and 2030 per estimates by the African Development Bank and IRENA.
- **Adopting a “just” perspective to financing Africa’s energy transition is essential** as it recognises the multiple factors that influence the way Africa’s energy system develops, its relationship and vulnerability with trading partners, its growth prospects and geopolitical factors outside of its control.

Financing the just transition in the context of equity

- **There should be clear principles to guide the financing of Africa’s just energy transition that recognise a country’s fiscal situation, such as existing indebtedness, access to national and international resources, private sector funding and use of national institutions:** Finance flows to Africa must explicitly adopt the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) as the basis for action. This implies embedding equity and justice as core principles into financing terms and conditions;

Finance Perspectives

- Finance flows must be needs-based and country-owned, and defined across short, medium and long-term horizons.
- Finance flows must mainstream the just transition components, including impact on livelihoods, employment, skills, affected small and medium businesses, informal and formal sectors, as well as local government dependencies etc.
- Financing of the just energy transition must include financing for plans to build adaptive capacity and fiscal resilience.
- Shifting to a low emission and climate resilient development pathway is a transformative process. It creates disruptions across the whole of society, resulting in economic and social transition-related side effects and costs. Finance must explicitly reflect and address these costs (ie. who is bearing the cost, how to share the cost and what risk sharing arrangements must be put in place).
- National circumstances will influence the ability to absorb or adjust to the additional costs of shifting to new pathways. Sovereign debt levels, the pace and quality of shifting to new pathways, the vulnerabilities of countries and existing financial architecture, as well as access to and dependency on finance flows must be factored into finance plans.

Finance Perspectives

Landscape of climate finance, finance instruments, indebtedness

- Based on data from Nationally Determined Contributions, it will cost around USD 2.8 trillion between 2020 and 2030 to implement Africa's NDCs, with African governments committing about 10% of the total cost (ie. \$250 billion per year).
- However, it is likely that: (i) the financial need is significantly underestimated, (ii) high debt levels and existing budgetary pressures will negatively affect the potential contribution by African countries, and (iii) the financing needs do not reflect a just and equity-based approach specific to Africa's heterogeneous circumstances.
- The financing gap is significant, in order to meet climate goals between 2026 and 2030, Africa requires around USD 133 billion annually in clean energy investment (IEA, 2022). Currently the total annual climate finance flows in Africa for 2020, domestic and international, were about 12% of the estimated amount needed.
- Within the NDCs, mitigation accounts for the largest share (66%) of reported needs in 2020-2030, with only 57% of funding accounting for mitigation finance (CPI, 2022). The adaptation financial needs are highly likely to be underestimated due to a lack of data and technical expertise to estimate the true cost of adaptation measures.
- There is an urgent need to improve the accuracy and quality of estimates and translation into financing roadmaps to ensure that the quantum of finance provided matches the actual need. However, there is an even more urgent need for initial estimates to manifest in the flow and access of funds to address the costs of transition, as energy security is the driver of growth and development across the region.

Finance Perspectives

Principles that should guide an African equitable transition

- **Justice needs to be placed at the centre of all just transition strategies to ensure an equitable transition for all.** African countries experience high levels of socioeconomic vulnerability and as such are susceptible to detrimental transition plans and climate finance. This stems from low levels of understanding around the socioeconomic context within countries, the heterogeneous needs of different regions and countries within the continent and a lack of community consultation and engagement.
- **Universal principles of justice exist in legal systems exist which can be applied to mobilising resources for Africa.** These are procedural, redistributive, and restorative justices, which are key forms of justice **that may** form the foundation of what is needed for an equitable transition across the continent. Additional elements such as intergenerational justice is equally essential recognising the youth endowment of the continent.
- explicitly.
- **Justice as a principle of finance applies to both source and use of funds.** That is, justice should be reflected in how funds are negotiated through their terms and conditions, in the ease and dignity of access by African countries and their institutions and incorporated into the design of interventions explicitly.

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