ACET African Center for Economic Transformation

Developing Green Industrialization for Resilience

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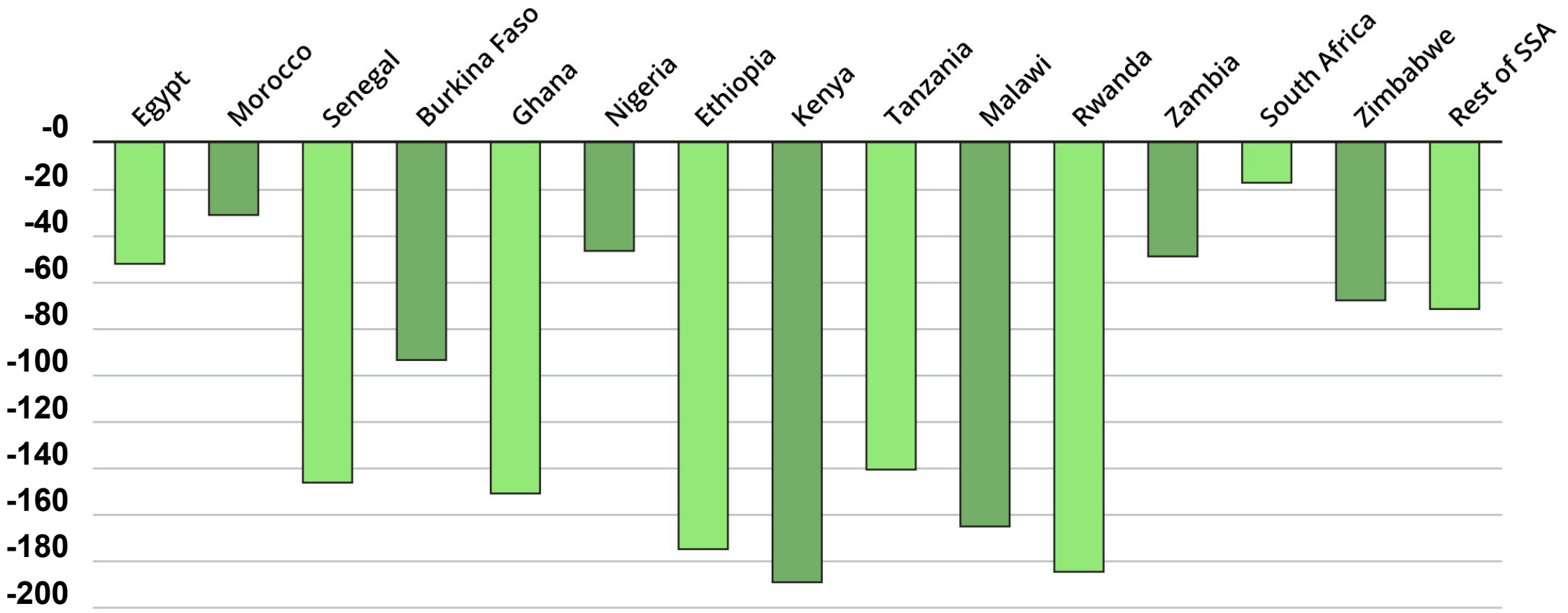
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Background

- Africa is facing a vicious circle of:
  - Climate vulnerability,
  - Escalating debt,
  - Environmental degradation and,
  - Lack of economic transformation => jobless growth.
- All this is happening in an era of geopolitical tensions and declining ODA
- How can Africa turn this vicious circle into a virtuous circle?

Africa's vicious circle: Climate change impacts

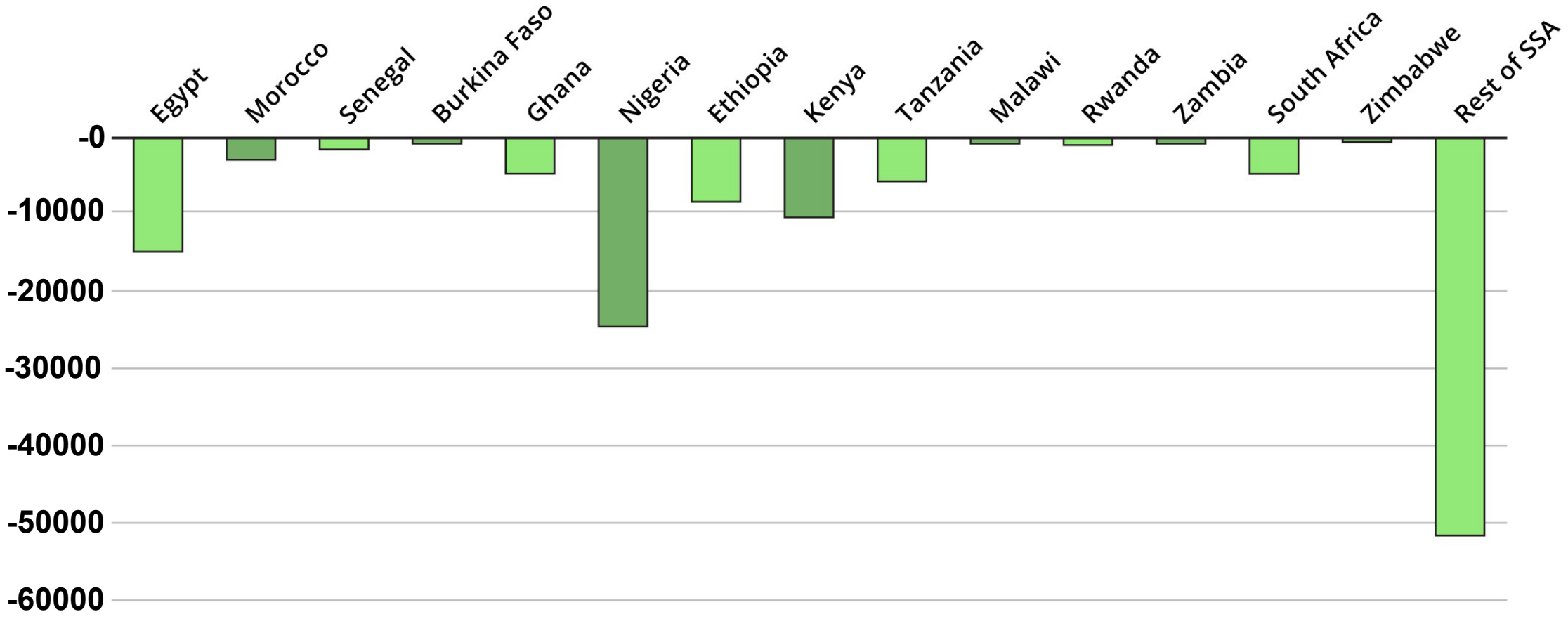
Fig. 1: Climate change impacts on household income (% changes)



Source: Asafu-Adjaye et al. (2024)

Africa's vicious circle: climate change impacts (cont'd)

Fig. 2: Impacts on welfare (US$ million)



Source: Asafu-Adjaye et al. (2024)

Africa’s vicious circle: Jobless growth

Rising under/unemployment for its rapidly growing youth population.

According to the World Data Lab and MasterCard Foundation, 23.6 million young Africans (aged 15-35) were unemployed in 2024.

This number is expected to grow to 27 million people by 2030. This is a ticking time bomb as evidenced by riots in Nigeria, Kenya, and the Sahel.



The Good News: Africa can turn the Quadruple Crises into an Opportunity

How?

A. By developing policy frameworks to address climate risks

- ❑ Transition risks: To achieve their NDCs, African countries need to implement climate-positive policies
- ❑ Spillover risks: They need to understand how climate-related measures taken by their trading partners will affect them, e.g., the EU's Carbon Border Adjustment Mechanism (CBAM)

B. By developing policy frameworks to implement green growth strategies

C. By scaling up and accelerating the energy transition through leveraging clean energy resources

D. By developing policies to enhance inclusion

E. By developing innovative policies to fund green growth

Achieving green growth (cont'd)

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A. Developing policy frameworks to address climate risks

We conducted three policy experiments to address transition and spillover risks in Africa:

1. Scenario 1: Addressing transition risk: An AU carbon tax: We impose a carbon tax of $10 per tCO_2e

2. Scenario 2: Addressing spillover risks: Effects of the EU's CBAM on African countries

Here, the tariff equivalent of the EU CBAM (or carbon border tax rate) for a given export of goods and services is calculated based on the differences between the emission taxes that would need to be paid in the EU and the emission taxes paid in the exporting country.

- Since South Africa is currently the only African country with a carbon tax, the effective carbon border tax rate for most African countries will be around $88 per tCO_2e.

3. Scenario 3: The AU Carbon Tax and the CBAM

In this scenario, we superimpose the CBAM on the AU carbon tax.

Scenario 1: Effects of an AU carbon tax

Country	GDP (%)	Welfare (US$ mil.)	Total Exports (%)	CO_2 emissions (%)
Egypt	0.20	-279	0.17	-7.3
Morocco	0.36	-72	-0.58	-3.0
Tunisia	-0.07	-101	0.02	-7.2
Cameroon	0.13	-28	-0.25	-1.5
Côte d'Ivoire	0.43	16	0.34	-1.5
Ghana	0.60	-21	0.65	-1.9
Guinea	0.37	-7	0.10	-2.4
Nigeria	-0.45	-1,030	-0.74	-3.2
Senegal	0.48	7	-0.80	-4.1
Central Africa	-0.23	-756	-0.53	-1.9
Ethiopia	0.70	62	-0.70	-2.4
Kenya	0.61	50	-0.81	-2.4
Rwanda	0.17	-10	-0.52	-2.1
Tanzania	0.52	22	-0.22	-1.7
Uganda	0.24	-28	-0.70	-2.1
Malawi	-0.09	-14	-0.16	-2.5
Mauritius	0.26	-5	-0.03	-4.3
Mozambique	1.32	58	-0.27	-1.6
Zimbabwe	0.19	-16	-0.73	-6.3
Botswana	0.52	-3	0.43	-5.9
Namibia	0.21	-10	0.37	-0.2
South Africa	-0.16	-549	0.61	-13.5

Asafu-Adjaye & Baffour Awuah (2024)

Scenario 2:

Addressing spillover risks: Effects of the CBAM

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Country	GDP (%)	Welfare (US$ mil.)	Total Exports (%)	CO_2 emissions (%)
Egypt	-0.17	-416	-1.01	-0.1
Morocco	-0.06	-189	-1.01	0.8
Tunisia	-0.96	-276	-2.67	-1.7
Cameroon	-0.11	-34	-0.66	0.3
Côte d'Ivoire	-0.16	-25	-1.04	0.8
Ghana	-0.24	-154	-0.78	-0.4
Guinea	-3.98	-183	-4.77	-2.7
Nigeria	-1.90	-2,845	-2.90	0.6
Senegal	0.53	31	-1.41	-0.6
Central Africa	-1.84	-2,006	-2.58	-0.9
Ethiopia	0.64	62	-0.92	0.6
Kenya	0.45	40	-0.83	0.5
Rwanda	-0.50	-28	-1.43	0.4
Tanzania	-0.10	-65	-1.07	-0.1
Uganda	-0.40	-78	-1.45	0.3
Malawi	-0.56	-21	-0.4	0.1
Mauritius	0.05	-3	-0.57	0.3
Mozambique	-2.52	-230	-4.98	-3.1
Zimbabwe	-0.72	-40	-1.07	-1.0
Botswana	-4.09	-351	-2.23	2.0
Namibia	-0.90	-1,123	-0.29	-14.3
South Africa	-0.17	-416	-1.01	-0.1

Asafu-Adjaye & Baffour Awuah (2024)

Achieving green growth (cont'd)

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B. Developing policy frameworks to implement green growth

- African leaders face a foundational policy question of how to pursue a green growth transition that prioritizes pressing development needs (e.g., economic growth, poverty reduction, job creation) with ambitious climate objectives, infrastructure and energy access, and sustainable natural resource management.
- African countries are at different stages of development and have different natural resource endowments and different industrialization levels
    - There are also differences in access to financing and investments, infrastructure, and RE development
- Therefore, a one-size-fits-all policy (or policies) will not work.
- Given the trade-offs between balancing climate, development, and long-term growth objectives and the fact that it is impossible to optimize them simultaneously, countries need to work out the most appropriate pathways, given national priorities.
- Countries also need to consider how they can effectively mobilize both domestic and international climate finance around their green growth priorities.

Achieving green growth (cont'd)

C. Scaling up and accelerating the energy transition by leveraging clean energy resources

- Africa holds 60% of the world's best solar resources and 39% of global renewable energy potential
- To date, however, African countries have largely been unable to take advantage of their abundant but underused renewable resources:
  - In 2020, renewables accounted for only about 14% of the total energy supply (IEA, 2021).
  - In the electricity sector, renewables accounted for about 22.1% of generation in 2019, with fossil fuels accounting for 77.1%.
- Overall, investments in fossil fuel assets remain higher than investments in low-carbon assets.
- About 60% of energy investment in Africa in the last few years went to fossil fuels, with a total 2021 annual energy investment amounting to $90 billion, reflecting a mismatch between pledges and actions (Climate Analytics, 2022).

Achieving green growth (cont'd)

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D. Developing policies to enhance inclusion

- Climate change affects the poorest members of the population. This is because most of them disproportionately rely on climate-sensitive sectors for their livelihoods. Examples include:
  - Farmlands, forests, fisheries, and other natural resources.
- We need to develop policies to address gender inequality and poverty.
  - Women form about 51% of the agricultural labor force, but compared to men, they have less access to land, modern farm inputs, finance, and institutions.
  - On the positive side, green growth is expected to create entrepreneurial opportunities and decent jobs. However, it may negatively impact low-income households and women in labor-intensive (e.g., agriculture) and carbon-intensive industries.
  - According to McKinsey (2022), the green transition could create approximately 200 million new jobs. But about 185 million direct and indirect jobs could be lost.
- Use of cleaner energy systems, compared to the current use of biomass, will lead to health improvements for women and children and improve livelihoods

Achieving green growth (cont'd)

E. Developing innovative policies to fund green growth

- As of May 2022, 45 out of 54 African countries had submitted updated Nationally Determined Contributions (NDCs) with ambitious targets to reduce greenhouse gas emissions by 2030.
- Most of these pledges are conditional on receiving external finance.
- By 2030, Africa will require an estimated US$2.8 trillion to meet its mitigation and adaptation needs.
    - On an annual basis, the continent needs about US$277 billion to transition to a low-carbon pathway (CPI, 2022a).
- With about US$29.5 billion annually in current climate finance inflows, Africa's climate finance gap is about 90% of its finance needs (CPI, 2022b)
- How can we plug this financing gap?
- A. By monetizing Africa's vast carbon stocks
- B. By leveraging innovative instruments

Plugging the finance gap: Monetizing Africa's carbon stocks through offset mechanisms



Exploit carbon stocks to increase flow of climate finance

African carbon markets could mobilize **$6 billion annually by 2030** and over **$100 billion by 2050**, but challenges remain.

Perception of risk due to:

- limited infrastructure,
- poor governance,
- **uncertain land tenure**,
- limited capacity and awareness

Compounded by

- lack of capacity on the part of Africa's private and public sectors to develop bankable carbon market projects,
- high cost of finance
- biased credit assessments.

Plugging the finance gap: Leveraging innovative instruments

New instruments:

- Blended finance:
  - Blended finance uses public or concessional capital to absorb risk, making investment more attractive to private investors.

- Debt swaps:
  - Development finance institutions (DFIs) provide a guarantee allowing government debt to be refinanced at a lower interest rate, on condition that the savings generated are directed to an agreed purpose such as a **development-**, **climate-** or **nature-related** project.
  - An example is Cote d'Ivoire's pioneering debt-for-development debt swap in which the World Bank replaced about $400 million of the country's high-interest debt with a new low-interest debt, with the savings used to finance education.

Concluding Remarks

- African leaders have shown strong commitment to the net-zero (or low-carbon) transition
- But face significant challenges in financing green growth
    - Africa receives a small fraction of global climate finance
    - And private sector contributions lag other regions
- **Role of national governments:**
- Governments should create conducive policy environments to attract domestic and foreign investments
    - Need to address governance and institutional challenges
- **Role of the AU:**
- The AU should improve collaboration across the region

Concluding Remarks (cont'd)

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Global cooperation and partnerships:

There is a need to accelerate reform to the Global Financial Architecture to address the debt issue and ensure that countries have sufficient climate finance, especially for adaptation.

- Although Africa is the continent most affected by climate change, it receives less climate finance than Asia and the Americas.
- Global collaboration and partnerships are also required to deal with:
  - The high cost of finance and biased credit assessments for African countries.
  - Renegotiation of mineral development agreements to ensure that African countries do not continue with the current model of just exporting raw minerals.
  - We need to forge a new path of value addition to our critical minerals to create decent jobs and raise revenues.

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Thank you.

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