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Enhancing international cooperation for climate action in Africa: A grounded theory analysis

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KEY FINDINGS

1. **Governance integration is the critical missing link for effective climate action**. The research reveals fundamental misalignments between climate governance structures—the core being the UNFCCC and its Paris Agreement—with the broader economic governance systematically undermining implementation efforts in African countries. While the UNFCCC effectively drives increased ambition through NDCs and global targets, it operates largely in isolation from the enabling economic, trade, and financial systems that determine countries' actual capacity to implement climate action. The UNFCCC therefore needs to enhance its orchestration role, recognising its limitations on facilitating implementation beyond its own remit.

2. **Institutional fragmentation creates competing policy signals**. African countries must navigate competing signals from different governance systems - while the UNFCCC encourages ambitious emission reduction targets, as an example the international trade regime restricts policy space for green industrialization, and the financial architecture imposes constraints that limit access to affordable capital for renewable energy investments. This institutional incoherence can explain much of the implementation gap that persists despite increasing climate ambition. However, solutions may not lie in institutional streamlining and common rules across the international cooperation ecosystem, rather signalling touch points orchestrated by the UNFCCC.

3. **Regional cooperation is both foundation and beneficiary of enhanced international cooperation**. The study shows that African countries lack the individual scale and bargaining power to effectively participate in global climate action or advance in technology value chains without stronger regional coordination. The African Continental Free Trade Area (AfCFTA) and Programme for Infrastructure Development in Africa (PIDA) emerge as critical platforms for building regional integration that enhances Africa's leverage in international climate cooperation.

4. **Transformative cooperation requires structural rather than incremental change**. The findings demonstrate that cooperation must be understood as both a means and an end—cooperation that is not only more effective but also more equitable, context-appropriate, and aligned with African development priorities. This requires fundamental reforms in power relations, economic models, financial systems, technology engagement, and crucially, governance structures that enable rather than constrain climate action implementation.

STUDY

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5. **Integrated governance approaches enable climate-development synergies**. By transforming the foundation of cooperative relationships through integrated governance approaches, the global community can enable more meaningful progress toward both climate and development objectives in Africa simultaneously. In the African context, a scenario where climate action delivers development co-benefits may not capture the context where at the core is development, which should respond to climate imperatives. This can address the full spectrum of implementation challenges facing African countries in the global climate response.

6. **UNFCCC must expand beyond ambition-setting to enable implementation**. The analysis demonstrates that addressing climate change in Africa requires the UNFCCC to move beyond its current focus on ambition-setting to actively facilitate implementation enablers. There is urgent need for institutional mechanisms that ensure policy coherence across trade, finance, technology, and climate systems, with specific opportunities through Mission 1.5 initiatives and the Just Transition Work Programme. At the core being the UNFCCC orchestration and convening role by providing the necessary signals to enable implementation.

7. **Coordination frameworks can bridge climate and economic governance**. The research identifies specific opportunities for enhanced governance integration through coordination frameworks that connect climate presidencies (the Troika) with other international institutions, creating political platforms for addressing implementation barriers and developing workstreams specifically focused on enablers rather than just ambition.

INTRODUCTION

Current unconditional and conditional Nationally Determined Contributions (NDCs) would limit warming to 2.6-2.8°C above pre-industrial levels by century's end, with unconditional NDCs alone leading to 2.8°C warming (UNEP, 2023). Achieving rapid, deep, and sustained greenhouse gas (GHG) emissions reductions (-43% by 2030; -65% by 2035 relative to 2019 levels and reaching net zero CO_2 emissions by mid-century) is necessary to keep the 1.5°C goal within reach (IPCC, 2023).

The Technical Dialogue Synthesis Report of the Global Stocktake (TD-SYR) underscores the large ambition gap - the projected 3% rise of GHG emissions by 2030 based on current NDCs, rather than the required 43% decline, alongside an even larger implementation gap (UNFCCC, 2023). Despite increasing ambition in NDCs under the Paris Agreement, global emissions continue rising (UNEP, 2023). This backdrop highlights the need to recalibrate global cooperation on climate action and enhance alignment. In particular, ensuring that country investments are informed by available opportunities in the cooperation ecosystem.

The gap between requirements and effort is also evident in the climate finance landscape. The 2023 Climate Policy Initiative's (CPI) Global Landscape report estimates climate finance flows reached almost $1.3 trillion in 2021/22, whereas required levels going to 2030 are $8-9 trillion, with a prognosis of five-fold increase thereafter to 2050 (CPI, 2023). At the same time, the IPCC Sixth Assessment Report (6AR) Working Group II indicates approximately 3.3-3.6 billion people live in contexts highly vulnerable to climate change, with a high proportion of species also vulnerable (IPCC, 2022).

The ambition-implementation paradox is particularly pronounced in Africa, where countries face significant barriers despite demonstrated willingness to contribute to global mitigation efforts (Fankhauser & Jotzo, 2018). As of 2023, 54 African countries had submitted NDCs, with 40 having included quantified targets (AfDB, 2023). However, implementation remains severely constrained. African countries engage in the global climate response from a distinct position. The continent contributes approximately 4% of global emissions (IPCC, 2022) while facing disproportionate climate impacts and significant development challenges (Arent *et al.*, 2014). Africa requires approximately US$2.8 trillion in energy investments by 2030 to meet development goals (IEA, 2022) yet receives only 3% of global climate finance flows (CPI, 2023). These disparities highlight the need for transformed cooperation that better serves African interests and development contexts (Northrop *et al.*, 2016).

The disconnect between climate commitments and implementation points to fundamental shortcomings in the cooperation ecosystem. As noted by a respondent in this study: "The United Framework Convention on Climate Change (UNFCCC) is quite effective in putting pressure on different countries to do more... but this is not connected to the real world, because it's not the UNFCCC system that supports you in implementing what you want to achieve in your NDC". This study explores this disconnect through a grounded theory approach to identify key barriers and potential solutions.

Despite various cooperative mechanisms established under the UNFCCC and other frameworks, effectiveness remains limited, with emissions continuing to rise and implementation challenges persisting (Chan *et al.*, 2018). This paper focuses specifically on delineating pathways to enhance cooperation for climate action from an African lens, examining how cooperative frameworks can be strengthened, reformed, and transformed to enable climate-compatible development (Mbeva & Pauw, 2016). Such an ecosystem would include: (i) the global 'economic architecture'; (ii) cooperation by Non-Party Stakeholders; (iii) bilateral cooperation between Parties; and (iv) cooperation through UNFCCC and other relevant UN processes.

1. APPROACH TO THE *STUDY*

This *Study* employs a grounded theory approach (Strauss & Corbin, 1998) to analyse multiple in-depth interviews with climate policy experts and practitioners with extensive experience in African climate governance. The research follows a constructivist grounded theory methodology (Charmaz, 2014), emphasizing the co-construction of meaning between researcher and participants.

Data was collected through six semi-structured in-depth interviews with experts representing diverse perspectives on international climate cooperation in Africa. Participants included senior policy advisors, academics, and practitioners with direct experience in UNFCCC negotiations, climate finance, and technology policy. Interviews explored three thematic areas: trade and technology access, fiscal space considerations, and financing mechanisms and cost of capital. The thematic areas therefore constitute the assumptions of the research on what are the most critical aspects of international cooperation for Africa.

Interviews were transcribed and analyzed using open and axial coding techniques. Initial open coding identified key concepts and themes, while axial coding established relationships between categories. The study could benefit from further theoretical sampling to guide further data collection in pursuit of theoretical saturation. The resulting framework is visualized as a logical map showing relationships between key concepts. As much as the research was focused on Africa, the emerging concepts are probably applicable to most developing countries.

As one interviewee noted: "How can the UNFCC process send the necessary signals to the cooperation system on a principle perspective?". This paper addresses three central research questions: What constitutes effective cooperation for climate action in the African context; What factors constrain or enable meaningful cooperation; How can cooperative frameworks be enhanced to better support climate-compatible development in Africa?

2. A FRAMEWORK OF ENHANCED INTERNATIONAL COOPERATION

The analysis results (see **Figure 1**) are presented in two parts. The first part reflects barriers to effective cooperation as gleaned from respondent interviews. The second part addresses core elements of enhanced international cooperation, whilst addressing transformation pathways—strategies for overcoming barriers towards achieving core components of enhanced cooperation. The second part forms the substantive part of this research

2.1. Barriers to international cooperation and transformation pathways

The analysis identified five key barriers that constrain enhanced cooperation for climate action in Africa. These represent interconnected challenges that must be addressed to enable more effective cooperation (Roberts & Parks, 2007). The first being **fundamental power asymmetries in global economic and political systems**, which constrain the potential for equitable cooperation. These asymmetries manifest in negotiating dynamics, resource flows, and decision-making processes through climate relevant governance structures, with developed countries historically exercising disproportionate influence over agenda-setting and rulemaking across all cooperative frameworks (Ciplet *et al.*, 2015). Commenting on carbon credits in the land use sector, one respondent asserted "You are sacrificing the economies of developing countries to clean the development of advanced economies." Transformation of power relations is a fundamental pathway to fair and enhanced cooperation requiring reforms in both formal institutional structures and informal relationship dynamics (Keohane & Victor, 2011). Necessary actions could include reforming voting structures in multilateral institutions, ensuring balanced representation in cooperative initiatives with accountability mechanisms in both directions, and a sharp geopolitical understanding to find optimal conditions for cooperation.

The second key barrier is the **positioning of African economies relative to the rest of the world**, where current economic models often position Africa primarily as a resource provider rather than a value-adding partner in global climate action (Hickel, 2017). This extractive approach limits developmental benefits of cooperation for African countries. The persistence of extractive models is reflected in critical minerals value chains, where Africa provides raw materials but receives limited value from manufacturing or technology development, including renewable energy technologies (Svampa, 2019). "The whole green transition is an extension of the colonial, even pre-colonial, relations with exploitation of African resources, except we are now doing this with a green flag." commented one respondent. As a transformation pathway, economic relations should be reshaped for more multiplicative cooperation that creates mutual value rather than extracting from Africa.

This can be achieved through more equitable approaches to mineral governance, creating linkages between resource access and value chain participation, and trade frameworks that support climate-compatible industrialization (Morris *et al.*, 2012).

The third barrier identified is **the structure of global financial systems**, which creates significant barriers to cooperation enabling climate action. These constraints include high capital costs, limited fiscal space, and illicit financial flows. The global financial architecture perpetuates disadvantages for African countries, with risk premiums, debt constraints, and fiscal limitations that inhibit effective participation in cooperative climate initiatives. Elucidating the significance of illicit flow in copper mining, informed by an United Nations Conference on trade and Development (UNCTAD) report, a respondent indicated that "Zambia alone lost $44 billion between... over 3-4 years. So, means a substantial amount of what should have flown to the national treasury." The required transformation of financial systems is to enable cooperation through accessible, appropriate, and patient capital. At the centre of this transformation pathway is reform of risk assessment methodologies, addressing illicit financial flows and tax evasion, whilst strengthening domestic financial markets to drive investment in renewable energy, addressing the balance between debt and non-debt instruments, and finally addressing barriers to private finance.

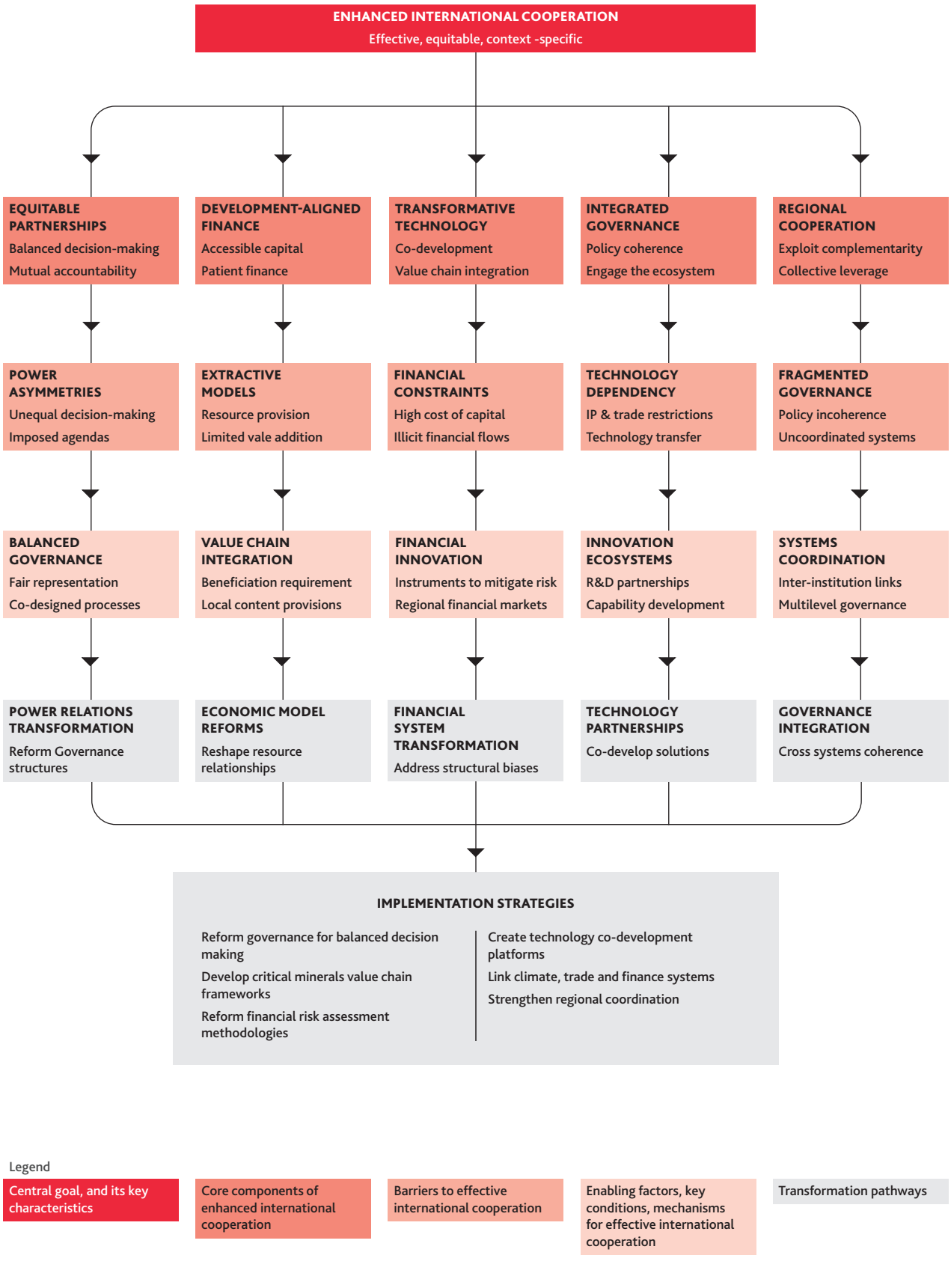
The fourth barrier is **asymmetrical technology relationships, creating dependency rather than partnership**, limiting the transformative potential of cooperation. Technology-related cooperation often perpetuates dependency through limited technology transfer, restrictive intellectual property regimes, and lack of support for endogenous innovation capacity (Watson *et al.*, 2015). "If we look at a country like Malawi, not very rich in terms of those high wealth generating resources, their potential emissions are driven by increasing access to energy, and to theoretically drive industrialization, which creates jobs and generally uplift the level of development." The respondent was reflecting on how transitioning to renewables may not accrue socio-economic benefits for the country. We need a shift from technology transfer to a technology partnership paradigm (de Coninck *et al.*, 2018). While technologies primarily reside with the private sector, governments and multilateral institutions can play a role to enable access. Strategies include technology co-development, building innovation ecosystems and capabilities, reforming intellectual property regimes for climate technologies, and developing manufacturing capabilities for renewable energy technologies.

The last barrier is **fragmentation in global governance systems**, which undermines the coherence and effectiveness of cooperation efforts on climate change. The disconnect between climate governance—where the UNFCCC is at the core—and economic, trade, and development governance systems creates contradictions and inefficiencies in cooperative efforts. Sharing general reflections on challenges facing African countries in climate negotiations, a respondent indicated that "We spend so much of our energies in the climate negotiations, focusing on things that will not give us a long-term solution." Integrating currently fragmented governance systems is essential for more coherent cooperation through refocusing global climate governance to focus on enabling implementation, developing policy coherence mechanisms, creating formal linkages between UNFCCC processes and other governance systems, while strengthening regional governance as an intermediary between national and global systems and developing regional renewable energy value chains. The solution space however may not lie in supra-organization or treaties, rather an orchestration role of the UNFCCC as argued by Kauffmann *et al.* (2025) the theory of change of the Paris Agreement remain a viable multilateral framework yet needs strengthening within the Agreement and complementary support from the outside

In assessing the full picture of transformation pathways towards enhanced cooperation, it is evident that the core components are mutually reinforcing, and multiple components need strengthening simultaneously to achieve the central goal. It further shows that transformations need to happen across multiple themes such as partnerships, financing, technology, governance, and regional cooperation, rather than isolated interventions. The map in **Figure 1**, illustrates that structural challenges create relationship dynamics that further reinforce barriers. For example, structural inequities lead to resource extraction without value addition, which limits fiscal space, creating a cycle difficult to break without systemic intervention. Hence the key aspect is addressing dynamics in relationships or cooperation.

What is also clear is that regional cooperation—in the case of Africa—is probably the most crucial element, serving as both a foundation for, and beneficiary of enhanced international cooperation. Understanding multilayered causality and response options as well as the different mandates/remits of institutions of the climate action ecosystem, it is evident that the UNFCCC process can only serve as a spark that is primarily driven by environmental outcomes, while recognising that achievement of such outcomes for a global commons problem requires cooperation. This is consistent with IPCC 6AR findings, which presents criteria for effectiveness of international cooperation as including environmental outcomes, with transformative potential, distributive outcomes, economic performance, and institutional strength (Patt *et al*., 2022). The implementation gap can therefore be understood as emanating from multiple interconnected factors.

FIGURE 1. Logical Map for Enhanced International Cooperation



2.2 Components of enhanced international cooperation

The analysis shows that future development of the UNFCCC climate regime should focus both on enablers of implementation and increasing ambition in mitigation commitments. This aligns with growing calls for a more holistic approach to climate governance that addresses systemic barriers to implementation (Newell & Taylor, 2020). The analysis also demonstrates climate justice aspects by highlighting structural dimensions of climate inequality and identifying specific relational dynamics that perpetuate unequal outcomes. The analysis identified five core components that constitute enhanced cooperation for climate action from an African perspective. These components represent interrelated dimensions that together enable more effective, equitable, and context-appropriate cooperation.

2.2.1. Equitable partnership structures

The African participation in climate cooperation is typified by deeply embedded historical power imbalances of the global economic architecture. The 'global economic architecture' refers to the complex framework of institutions, agreements, rules, and practices that govern global trade and financial systems, which together shape how countries access capital and participate in global commerce.

FIGURE 2. A representation of the international economic architecture[1]

The framework of institutions is presented in **Figure 2**, as an adaptation of Ngwadla *et al.* (2024). With access to capital and participation in global commerce being central to a fair transition and a country's mitigative and adaptive capacity,[2] both the finance and trade regimes of cooperation are post-World War II instruments, when the world comprised only 75 sovereign nations compared with 195 today, and the whole of Africa was still under colonial rule except for Ethiopia and Liberia. On trade cooperation General Agreement on Tariffs and Trade (GATT), a precursor for the World Trade Organization (WTO), was agreed in 1947, whereas on finance the International Monetary Fund (IMF) and World Bank were formed in 1944. As such, Africa had no voice in designing the systems that now govern their economies.

Amongst other features, this global economic architecture lacks meaningful voting rights and representation of African economies. For example, the Nordic countries are in a group of 8 nations with one Danish Executive Director in the World Bank, while Germany and France have one executive director each, but 54 countries in Sub-Saharan Africa have only two executive directors representing them, who would struggle to keep track of all the needs and projects of countries in their constituencies.

More concerning in financial and trade decision-making is inherently undemocratic governance by design of the IMF, following a quota system based on financial contributions. The system grants de facto veto powers to major shareholders with the United States holding sufficient voting rights to block major decisions—over 15% of IMF voting rights, enough to block major decisions requiring 85% approval, while European countries collectively control significant voting blocs to achieve the same effect, while African nations remain fragmented with minimal individual influence.

The calls for reform are mainly premised on the unresponsiveness of these institutions to present-day economic realities, e.g. India's GDP is larger than that of the U.K., yet India's quota is only 2.75% while the U.K.'s is 4.23% (Brookings Institution, 2024). African countries are therefore systematically excluded from creating the rules that now constrain their development, with the system perpetuating what has been described as extractive developmentalism, once at the core of colonial systems.

According to the European Parliament (2024), of the thirty-nine highly indebted poor countries (HIPC), 34 are in Africa, and there is no solution in sight without fundamentally reforming these colonial-era institutions. Ghana has had seventeen debt restructuring arrangements since independence; while African countries pay four times more than borrowers in the USA and eight times more than those in Germany for loans (UNCTAD, 2023). This translates to a situation where countries like Sudan use 25.5% of export revenues for debt service and Ghana 8.2%, demonstrating how the architecture perpetuates African economic subordination (European Parliament, 2024).

The current trade system perpetuates extractive developmentalism where African countries remain locked in cycles of exporting raw materials and importing finished goods. This colonial-era trade pattern was designed to benefit industrialized nations and continues today through rules that favour processed goods from developed countries while keeping Africa as a supplier of unprocessed commodities. Structural trade deficits became a major driver of external debt since

1 GATT – General Agreement on Tariffs and Trade; TRIPS – Trade-Related Aspects of Intellectual Property Rights; AFDB – African Development Bank; UN – United Nations; WTO – World Trade Organization

2 Ability of a country to effect its intended transition, which is a function of socio-economic progression and economic activity.

developing countries became net importers of food, energy and intermediate capital goods, expensive commodities that led to balance of payment challenges and drove countries into further borrowing (European Parliament, 2024). This creates a vicious cycle where trade patterns generate debt, which then constrains development.

These inequities originate in colonial relationships and continue through economic models that position Africa primarily as a resource provider rather than an equal partner in the global economy. As emphasized by one interviewee, "So, the UNFCCC was never designed to be a globally beneficial mechanism at all. It was always going to benefit advanced capital, while the source of that benefit was always going to be the periphery of advanced capital. So that's the political economy perspective."

These structural inequities manifest in unequal terms of trade, limited access to technology, and persistent debt dependencies. In the context of climate policy, they result in disproportionate burdens placed on developing countries while limiting their access to the means of implementation. Enhanced cooperation requires fundamental shifts in partnership structures to address historical power imbalances. Currently, cooperation often reflects and reinforces unequal relationships. The analysis suggests that equitable partnership structures would include:

1. Balanced decision-making power in cooperative arrangements;Recognition of historical responsibilities that shapes differentiated contributions in terms of cooperation;
2. Co-development of cooperation priorities rather than externally imposed agendas;
3. Mutual accountability mechanisms to ensure shared responsibility for outcomes, in both action and support.

According to the World Economic Forum (2023), only 12% of climate partnerships involving African countries demonstrate equitable governance structures where African partners have equal decision-making authority. This underscores the substantial gap in creating truly equitable cooperation frameworks. Developing frameworks that specifically address power imbalances and ensure climate action supports rather than undermines development could help align climate and development objectives. One interviewee suggested: "If some of these financial institutions have the mandate to be supporting local integration into technology value chains as a principle, I think that would help."

2.2.2. Development-aligned financing

The analysis suggests that African governments must deal with trade-offs such as limited government fiscal space, which constrains public investment in climate action, while committing to increased ambition following external actors' demand.

BOX 1. South African JET-P

DESCRIPTION

- The International Partners Group (IPG)[a] and South Africa agreed to coal phase-down package in 2021; more international partners by 2023.
- The initial package was $8.5 billion, and total package has increased to $11.6 billion delivered through multiple DFIs, MDBs,[b] national facilities.
- In the original $8.5 billion, concessional loans are $5.3 billion, commercial loans at $1.5 billion and grants are $330 million or 4% of the package.

COUNTRY FACTS

- Installed power capacity is 54.7 GW where coal represents 38,773 MW, nuclear 1,860 MW, hydro 3,443 MW, solar 2,287 MW, gas 2,409 MW
- Coal contributes 73% of installed capacity, with the power sector contributing 41% of the country's CO_2 emissions.
- NDC mitigation targets: 398-510 $MtCO_2e$ by 2025, and 350-420 $MtCO_2e$ by 2030; required renewables of about 70 GW to achieve NDC targets.
- The Integrated Resource Plan (IRP) 2019 is to retire 12 GW of coal plants and add 18 GW of wind and solar by 2030.

AREAS OF FOCUS

- Decommissioning of the Komati Coal Power Station (1,000 MW) and using the facility for renewable energy generation and battery storage.
- Other areas include, electricity transmission, green hydrogen, electric vehicles, just transition of the workforce.
- Additional areas have been included since 2021, such as renewable energy manufacturing, energy efficiency, road-to-rail.

FISCAL SPACE

- The JETPs $11.6 billion is about 3.8% of the country's national debt of $300 billion as of December 2024.
- The total 5-year plan for the JETP investment by South Africa is $98 billion which would translate to about 33% of national debt.
- The country's debt as of 2014 was 43.9% of GDP and in 2024 at 76.9% of GDP and projected to be 83.6% of GDP in 2029.
- The country's Gini Co-efficient is at 0.67 amongst the highest in the world and unemployment at 32.9%.

FRAMEWORK INSIGHTS

- The country has limited fiscal space to invest in the transition, noting other socio-economic challenges such as high unemployment and inequality, and pursuit of SDGs; insufficient and unreliable power supply risk instability. As such, policy space to address the development challenges is key.
- The transition could drive the country into a debt crisis noting the $98bn need compared to the $11.6 bn package; as well as the financing instruments where only 4% of the package is grant. The country is already above the 60% debt-GDP ratio, projected to exceed 80% in 5 years.
- The programme has belatedly included a focus on integration in renewable energy value chains and battery technology manufacturing; so as the inclusion of Green Hydrogen noting the country's endowment in Platinum Group Metals which are key in catalytic converters present more equitable options.
- The relevant core components of the framework therefore include elements of power asymmetry in the negotiation of the package, development aligned finance considerations from a fiscal space and debt considerations. Transformative technology engagement are probably the most relevant in this case.

[a] Original partners from 2021 include the United Kingdom, United States, European Commission, France, Germany, subsequently joined by Denmark, Netherlands, Switzerland, Spain.

[b] Include the World Bank, Climate Investment Funds, Agence Francaise de Development, KfW, African Development Bank, International Finance Corporation, European Investment Bank, amongst others.

TABLE 1. African climate finance flows (CPI, 2024)

FLOWS	2019/20 29.5	2021/22 43.7
PRIVATE FINANCE	42 Goo	808%)
Domestic	2.1 (7%)	3.2 (7%)
International	16 (6%)	3.3 (8%)
Unknown	0.5 (2%)	1.5 (3%)
PUIUC FINANCE	253 (86%)	35.7 (82%)
Domestic	1.6 (5%)	1 (2%)
International	23.5 (80%)	34.7 (79%)
Unknown	0.1 (0.5%)	-
USE		
Adaptation	11.4 (39%)	13.8 (32%)
Mitigation	14.6 49%)	19.9 (46%)
Dual benefits	32 (11%)	9.3 (21%)
Unknown	0.4 (1%)	0.7 (2%)
SECTOR		
Energy Systems	9.4 (32%)	13.7 (31%)
Goss-sectoral	8.5 (29%)	12.8 (29%)
MOLL/	4.6 (16%)	7 (16%)
Transport	2.6 (9%)	4.5 (10%)
Water & Wastewater	2.6 (9%)	32 (7%)
Buildings & Infrastructure	1.3 (4%)	0.9 (2%)
Other	0.6 (2%)	1.7 (4%)

FLOWS	2019/20 29.5	2021/22 43.7
INSTRUMENT		
Grant	88 (30%)	14.0 (32%)
Low-cost project debt	8.3 (28%)	11.4 (26%)
Project•level market rate debt	7.6 (26%)	10.9 (25%)
Project.ierel equity	1.8 (6%)	2 (5%)
Balance sheet financing (equity portion)	12 (4%)	33 (8%)
Balance sheet financing (debt portion)	0.6 (2%)	0.1(0.2%)
Budgetary Expenditure	•	0.3 (1%)
Unknown	1.2 (4%)	1.8 (4%)
SUBREGION		
Eastern Africa	93 (32%)	12 6 (29%)
Western Africa	7.1 (24%)	10.9 (25%)
Northern Africa	5.7 (19%)	7.3 (17%)
Southern Africa	22 (7%)	3.9 (9%)
Central Africa	13 (6%)	3 5 (8%)
Unknown/MA& Regions	32 (11%)	5-5 (13%)

One respondent observed that "The finance discussion is no different to what I was saying about mitigation, in that it is just about putting pressure on each other. We put pressure on each other to do more and not connected to the real world."

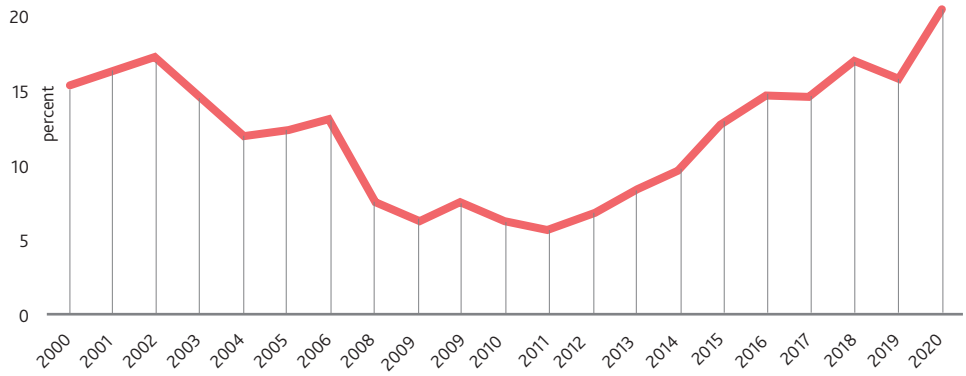
Furthermore, most African countries' contribution to the global mitigation effort is towards increasing access to modern energy—crucial to development and adaptive and mitigative capacity—as such avoided emissions rather than a reduction in emissions. The UNFCCC finance discussions is increasingly relying on mobilising the private sector finance, but this has largely not happened. The main reasons being misaligned incentive structures for the private sector and the debt burden from loan-based finance for climate action.

Of the $43.68 bn average flows to Africa for 2021-2022, private finance was in the range of 14-18% of total finance flows. This is subpar compared to needs or leverage ratios in Africa where every Multilateral Development Finance Institution (DFIs) finance ($18.9 bn) is matched by a ratio of 1:0.22 and 1:0.42 in 2019/20 and 2021/22. Regarding financing instruments, grants and low-cost project debt constituted 58% of climate costs for both 2019/2020 and 2020/2021. However, grants accounted for only 8.8% and 14% in the respective years as shown in **Table 1**. This suggests that, under the current approach, the transition for African economies could result into these economies becoming net losers. (Table 1)

At COP29 in Baku, Multilateral Development Banks (MDBs) committed to raising $120 billion, with $65 billion from the private sector, with the assumption that MDBs can leverage 54 cents in private finance for every $1. For comparison, they mobilized 38 cents per dollar spent in 2023, which is quite ambitious for African countries (Worlbank, 2024). This is relevant for discussions such as the Baku to Belém Roadmap to 1.3T and long-term finance in the UNFCCC, especially regarding the assumptions made about funding sources, such as the expected contribution from private finance. Africa's private climate finance is also mostly concentrated in energy systems at 72% (CPI, 2024), whereas African countries generally prioritise adaptation investments.

Climate finance flows continue to be primarily in the form of debt instruments despite high debt vulnerability in the region. As much as 51% of climate finance to Africa comes as debt—split equally between low-cost debt and market-rate debt. This proportion of loans in Africa's climate finance mix is more than double that of other regions, such as East Asia and the Pacific (18%) or Latin America and the Caribbean (20%) (CPI 2024). While the share of climate finance provided as debt is lower in African countries experiencing debt distress (36%) and high debt distress (43%), it is significantly higher in countries with moderate debt distress (61%), with more than 17% of public finance going to LDCs comes as market-rate debt, increasing their already substantial debt burdens, see **Figure 3**. In responding to this challenge, it may be prudent of the UNFCCC to engage and provide guidance to the cooperation ecosystem on appropriate funding instruments, and grant-debt mix for development partners; as well as low-cost and market-rate project finance mix. (Figure 3)

FIGURE 3. Governments external debt payments as a percentage of revenue (Fofack, 2021)

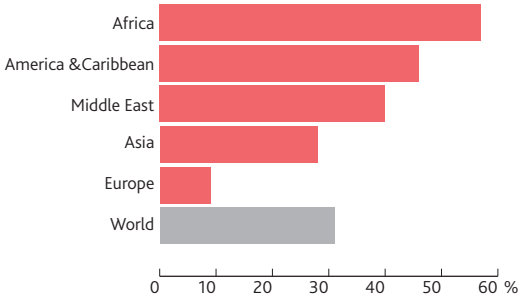


African countries face significant financial barriers to climate action, including high cost of capital, illicit financial flows, and exchange rate vulnerabilities. As noted by one interviewee, these constraints can be substantial: "Zambia alone lost $44 billion between... over 3-4 years. So, means a substantial amount of what should have flown to the national treasury." Due to illicit financial flows the government is losing revenue thus contributing to limited fiscal space, exchange rate vulnerability and subsequently a debt trap. Another respondent noted, "The other part is that the contracts or the agreements that have been signed are so sympathetic to the multinational cooperation. In a sense they have the freedom to externalize the revenues and the profits." Several interviewees highlighted the importance of tackling illicit financial flows to increase fiscal space: "So that is one at that level, because then we are going to influence the policy framework of agreement about financing. So that we can then shape the policies and decisions that we make in the climate change negotiations, because that's where the critical issue is."

The high cost of capital represents a particularly severe barrier for renewable energy investments. While the levelized cost of electricity from renewables has fallen globally, higher financing costs in Africa often make fossil fuel investments comparatively more attractive. According to IRENA (2023), the weighted average cost of capital for renewable energy projects in sub-Saharan Africa ranges from 12-20%, compared to 3-5% in OECD countries. This disparity can increase the cost of renewable electricity by up to 50%. In financial markets African countries also have to deal with perceived risk despite viable investment opportunities. During COVID, as shown in **Figure 4**, almost half of the countries whose credit ratings were downgraded were African economies, which would significantly impact investment and cost of capital.

The level of indebtedness is compounded by the cost of capital for developing countries, which is largely driven by perception. According to Fofack (2021), Ethiopia, a country with one of the highest growth rates in the world, with an external debt-to-GDP ratio of about 30.5% going to 2020, well below the IMF threshold of 60% for prudent debt levels, remains a sub-investment grade borrower, with its 10-year sovereign bond trading at an average of 6.6%, against the global benchmark of 0.74% at the height of the pandemic. Nigeria, one of Africa's largest economies, with one of the lowest external debt-to-GDP ratios at about 15% among emerging economies, its 10-year sovereign bond traded at a default-driven rate of 9.1% at the height of the COVID-19 crisis.

FIGURE 4. Regional distribution of sovereign credit ratings downgraded in 2020 (Fofack, 2021)



A comparison of borrowing rates incurred by African governments on their sovereign debt to those borne by more advanced economies, most of which have significantly higher debt-to-GDP ratios is very instructive. Italy, which over the past two years recorded a debt-to-GDP ratio of 134.8%, was paying less than 0.91% on its 10-year sovereign bond at the height of the pandemic downturn, paying significantly less on its bonds compared to countries across Africa (*Ibid*).

The risk perception is not even informed by a historical record of defaults; a comparison between a 10-year dollar-denominated Namibia Eurobond (481.6 basis point spread) with one from Greece (222.6 basis point spread) even though both countries have similar credit ratings (Ba3), with Greece having a history of defaulting. Similarly 10-year bonds with similar maturity of Mauritius (Baa1 rating) and Italy (Baa3 which is one notch above junk status) yet, Mauritius's 10-year bonds had a spread of 245 basis points, against 92.7 basis points for Italy's whereas Italy's external debt at the height of the COVID-19 crisis totalled US$ 2.6 trillion—more than three times the combined debt owed by African countries (US$841.9 billion) to their external creditors at end of 2019 (*Ibid*).

BOX 2. Zambia's illicit financial flows

DESCRIPTION

- Copper as a global critical mineral is the mainstay of the economy with the country ranked 7th in the world and 2nd in Africa producing 698,000 tonnes per annum as of 2023.
- Copper contributes 70% of all export earnings for the country, where it earned $6.7 billion in 2023, with the country aiming to reach 1 million tonnes by 2030.
- It is estimated that climate finance flows to Zambia were at about $50 million dollars in 2021 whilst the total expenditure on climate-related activities amounted to over $65 million in 2018.

COUNTRY FACTS

- Installed power generation capacity of 3,777 MW with hydro contributing 83% of the energy mix which has been severely constrained due to droughts in the region.
- Peak demand is at 2,400 MW and the economy operates at an energy deficit of 1,360 before imports due to only about 1,000 MW available generation.
- Fossil fuel power generation—coal and heavy oil—only contributes 15% of the energy mix.
- Emissions are at 36.2 million tonnes, with fossil fuels only contributing 9.27 million tonnes in 2022, LULUCF is 78%.

AREA OF FOCUS

- Africa loses an estimated $88.6 billion annually through illicit capital flight, equivalent to 3.7% of Africa's GDP.
- Between 1995 and 2014, Zambia recorded $28.9 billion of copper exports to Switzerland, more than half of all its copper exports, but these exports did not show up in Switzerland's books.
- Trade misinvoicing, the under-declaration of exports, and other fraudulent trade practices cost Zambia about $12.5 billion between 2013 and 2015.

FISCAL IMPLICATIONS

- The country has a nominal GDP of $26.4 billion with real GDP growth of 2.4% in 2024; unemployment rate of 13% with the informal sector employing 80%.
- The Debt-GDP ratio was 69.6% and external debt of $23.1 billion which peaked at just over $27 billion in 2024 above the country's GDP.
- The government is therefore losing approximately $1.2 billion in tax revenue, which is almost 5% of GDP.

FRAMEWORK INSIGHTS

- The structural limitations of the global trade and finance ecosystem continue to under develop the country, where Zambian economy is highly reliant on copper sales contributing over 70% of export earnings and foreign exchange with limited to no integration in renewable technology value chains.
- Between 2013 and 2015 the country lost just over $4 billion[a] per annum in the period from illicit financial flows—a key driver of lost pubic revenue, foreign exchange shortages, increased borrowing. Remarkably, the annual revenue lost from illicit flows is almost 20 times the climate finance received in one year.
- The country's priority is diversifying the energy mix away from a reliance on hydropower, due to climate impacts. With limited contribution to emissions, an equitable transition for Zambia would be integrating in the technology value chains and local content requirements as it expands its industrial energy supply.
- The relevant core components for Zambia include power asymmetries both in negotiating mining licenses with multinationals and combating illicit flows in the global financial sphere; development-aligned finance.where the country's fiscal space is constrained by illicit flows, high borrowing to address multiple socio-economic challenges; transformative technology engagements which facilitate mineral beneficiation on the back of a reliable low-emission energy mix.

[a] Company tax rate in Zambia is about 30%

The analysis identified four key elements of development-aligned financing:

1. Accessible capital that supports – not limits – development, with financing available on fair terms and timelines. This includes instruments that help lower the cost of capital for investments towards climate action.
2. Long term, flexible finance (often called "patient finance") with timeframes appropriate for transformative investment. This should come primarily from grants and highly concessional loans, including instruments that share risks more equitably.
3. Support for raising domestic funds, including expanding fiscal space, and technical assistance for building domestic capital markets. This can support local transitions, which create a virtuous cycle of cash circulation within African economies.
4. Transparency mechanisms that prevent illicit flows and misuse of resources. This includes regulations, accountability frameworks (a "compact"), and delivery of support commitments under the UNFCCC.

Enhanced cooperation requires financing mechanisms that are aligned with development priorities and accessible on appropriate terms. Current financing approaches often fail to meet these criteria: "What central banks do in order to contain the inflationary pressure is [...] they'll continue talking about investments and attracting more investors in the country [...] They will also attack the problem from the interest rate angle, they raise interest rates in order to contain the inflation which is being pushed or more by the exchange rate dynamics."

Addressing illicit flows, developing strategic industrial policies, and mobilizing patient public finance could help reclaim policy space for African governments. As noted by one interviewee: "My perspective on finance will be, we really need to reverse the current processes that are shifting responsibilities for mitigating the climate crisis to African economies, away from the biggest polluters and most of those so-called innovations that you are beginning to, green bonds, blue bonds, the concessional finance and so are doing exactly that."

2.2.3. Transformative technology engagement

Africa is behind in the innovation curve in respect of renewable energy technologies. Significant barriers exist to accessing renewable energy technologies in African countries. The barriers can be seen in three perspectives: access conditions to the technologies, integration in manufacturing technology value chains, and Africa being a critical source of minerals relevant for the

technologies. According to the United Nations Industrial Development Organization (UNIDO, 2023), Africa accounts for less than 1% of global renewable energy patents and approximately 3% of global manufacturing of renewable energy components. This indicates the significant opportunity for transformative engagement with African countries in technology cooperation that is mutually beneficial to technology owners and governments in the continent.

New environmental products are more likely to emerge and get commercialized by business entities in countries with a strong ecosystem for innovation, mostly the developed countries. To illustrate, 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 clear: it will have to pay high royalties for importing environmental technologies required for the transition to a low carbon economy. This will require Africa to have adequate foreign exchange and low-cost capital to purchase these technologies—both of which are difficult to secure under the current global economic architecture.

Considering the technology dynamics and the continent's endowment in critical minerals, to pursue sustainable development and integration in technology value chains, African countries could impose requirements related to transfer of technology. The rules at the WTO do not prohibit countries from mandating transfer of technology as a condition for allowing investment. Further, African economies may wish to provide preferential treatment to their domestic mining entities as compared to foreign mining companies. However, this flexibility is circumscribed by the requirement that the services purchased should be for governmental purposes and not with a view to commercial resale, or with a view to use in the supply of services for commercial sale (Article XIII.1 of the General Agreement on Trade in Services).

On the other hand, the rules at the WTO would allow African economies to impose export taxes for ensuring domestic availability of critical minerals for downstream value addition and processing. But these would be constrained by the commitments of African economies in their Economic Partnership Agreements (EPAs) such as with the European Union. They can also impose technology transfer requirements as a condition for investment. Further, subject to their sector-specific commitments, most African economies can discriminate in favour of domestic service suppliers for mining and other services related to mining. Finally, in respect of procurement by governments of goods and services of its own use and not for commercial purposes, African economies can accord favourable treatment to their domestic producers and service suppliers. However, each of these flexibilities are sought to be curtailed in new generation trade agreements.

According to Das (2024), in recent free trade agreements and similar other trade agreements, attempts are being made to negotiate new commitments ostensibly to supporting decarbonization. Most African economies are not parties to these new generation trade agreements, which may be included in the WTO rulebook or through Free Trade Agreements (FTAs), which could hamper their integration in technology value chain of processed products.

1. Firstly, some recent FTAs prohibit export taxes (See, for example Article 2.16 of the Trans-Pacific Partnership Agreement; Article 2.7 of the Interim Agreement on Trade between the European Union and the Republic of Chile; Article 17 of EU Algeria Association Agreement).
2. Secondly, the flexibility to impose technology transfer requirements on foreign investors has been curtailed in some FTAs (See, for example Article 9.9 of the Trans-Pacific Partnership Agreement).
3. Thirdly, in some FTAs the parties have agreed to accord non-discriminatory treatment in government procurement of products and equipment relevant for renewable energy.
4. Fourth, in respect of an authorization to explore for or produce energy goods - hydrocarbons and electricity- and raw materials, in its ongoing FTA negotiations, the EU has sought that Parties shall ensure that such authorization is granted based on objective criteria following a public procedure that is non-discriminatory between entities of each Party (See, for example Article X.7.1 of European Union's (EU) proposal for a legal text on Energy and Raw Materials in the EU-India trade agreement).

This would curtail the flexibility available to African economies to give preference to their domestic mining firms. Despite possessing critical minerals essential for these technologies, African countries remain largely excluded from manufacturing and higher-value segments of renewable energy value chains. As one interviewee observed: "African countries are behind in the renewable energy technology innovation curve, right, and likely to continue being net importers of renewable energy technologies for the foreseeable future." This exclusion from technology value chains limits both the economic benefits of the transition and the ability to develop context-appropriate technologies. The situation is compounded by intellectual property restrictions and limited technology transfer.

These barriers reflect broader patterns of technology dependence. Africa's position as a supplier of critical minerals for the energy transition could potentially be leveraged to negotiate better terms, technology transfer, and value chain participation. Africa holds approximately 30% of global mineral resources and over 40% of specific critical minerals like cobalt, manganese, and platinum (World Bank, 2022). One interviewee pointed to possible approaches: "What's obviously difficult here, it's not like Africa has not been trying to develop, it's not like this is suddenly a new objective." An example from other regions may offer insights: "If you look at Nickel in Indonesia, the lever that they pulled used a stick approach, through no export of raw nickel, and that stimulated the investments in processing capacity and beneficiation of that nickel." "There are a whole range of systemic challenges that are at play, so I don't have the answer, we need to think about concrete, practical requests to take into negotiations."

Effective cooperation must explicitly recognise the value that each party brings to the relationship. Many African countries bring critical minerals, market potential, and low-carbon development opportunities, whereas developed countries

BOX 3. Morrocco renewable energy manufacturing

DESCRIPTION: WIND	DESCRIPTION: SOLAR
• Siemens Gamesa's 37,500 m² manufacturing facility in Tangier designed to produce 63-meter composite blades for the SWT-DD-130 platform for wind turbines. • The plant opened in October 2017, following an investment of 1.1 billion dirhams ($100 million). • The company announced plans to sell the facility in late 2022, with production stopping by early 2023 primarily due to quality issues leading to the suspension of commercial activities on the 5.X onshore platform. • Designed to make blades for local projects and export to Europe, the Middle East, and other African countries.	• Morrocco has several local companies assemble and mount solar collectors, such as PV INDUSTRY, ALMADEN, CLEANERGY, or produce complementary equipment such as batteries, solar equipment, cables and switches such as Ifrikia, Casabloc, Imacables, Câbleries du Maroc and Nexans. • The local manufacturing is stimulated by significant solar investments such as the Noor Laayoune Solar PV Park (84.50 MW solar PV) and Ouarzazate Solar PV Park (71.50 MW solar power).
KEY FACTS	KEY FACTS
• Morocco's national strategy is to produce 52% of its electricity from renewables by 2030, with wind reaching 2,373 MW by end of 2024.With 72% market share in Morocco, Siemens Gamesa had delivered wind energy projects of about 550 MW. • Siemens Gamesa has installed wind energy capacity, in several African countries, including Egypt (500 MW), South Africa (850 MW), and with installations in Djibouti, Mauritania, Ethiopia. • Changes in the global market, with pandemic-related supply chain problems skyrocketing steel and aluminium prices made manufacturing wind turbine components extremely challenging, despite strong demand for wind energy.	• Morocco aims to increase renewables in its electricity mix to 52% by 2030, comprising 20% solar, 20% wind, and 12% hydro. • By 2030, Morocco has ambitious renewable energy goals to achieve a total installed solar capacity of 5,000 MW as part of its renewable energy strategy. • Morocco has launched one of the world's largest solar energy projects costing an estimated $9 billion. The aim of the project was to create 2,000 megawatts of solar generation capacity by 2020.
FRAMEWORK INSIGHTS:	FRAMEWORK INSIGHTS
• A stronger African market demand and logistics could have assisted the company in managing higher costs, technology issues and recoup investment recoveries. • There was some integration into the technology value chain, the assembly stage, whereas the manufacturing was wads offshore, a manufacturing ecosystem could have allayed some of the logistical complexities. • Four manufacturers (Denmark's Vestas, Spain's Siemens Gamesa, China's Goldwind, and General Electric of the US) accounted for 55% of all wind turbine production in 2019.	• Despite having several local assembly companies and optimal solar conditions, Morocco remains 100% dependent on imported solar panels, highlighting the challenges of building domestic manufacturing capacity in a Chinese-dominated global market. • While Morocco has invested heavily in R&D institutions like IRESEN and MASEN, accessing advanced manufacturing technologies remains a significant challenge, limiting the development of true local production capabilities. • Labor costs of $5-10/hour make Morocco competitive for manufacturing raising an issue about trade and the global economic order.
The most relevant core component in this case is transformative technology engagement - where opportunities for deeper engagement in the technology value chains translate into fair distributive outcomes. Enhancing regional cooperation is also key for increased scale and market demand. In addition, development aligned finance is also relevant to support long-term investments in manufacturing capacity.	

bring technology, finance, and institutional knowledge. The context of such cooperation should however recognise that climate cooperation must follow a sequential approach that prioritises building economic capacity before demanding rapid emissions reductions, noting that industrial development may temporarily increase emissions but creates long-term capacity for sustainable transitions. One respondent observed, "Every country in Africa has an industrial policy of some kind... But that industrial policy, in my view, is designed with a kind of western model in mind... We don't have a long-term context relevant type of an industrial policy or industrial plan."

Furthermore, African countries lack the scale, resources, and bargaining power to effectively implement climate action or advance in technology value chains without regional cooperation. "A single African country on its own, cannot do it... The only way that you can survive into this treacherous sort of future is if you band together and create that leverage... In the absence of that it becomes quite fragmented, just weaker, smaller."

The analysis suggests transformative technology engagement would include:

1. Developing regional innovation and market ecosystems support that builds endogenous capacity. This can be stimulated by harmonized regional manufacturing standards, along with testing and certification facilities.
2. Co-development of appropriate technologies suited to for African contexts, where development assistance is aligned with long-term industrial development objectives. This calls for specific industrial policies for renewable energy value chains.
3. Value chain participation rather than resource extraction alone. A fair-trade framework for critical minerals and a local content minimum has potential for value retention in Africa. However, this requires reform in trade agreements to allow to create the policy space for green industrialization.
4. Knowledge and capability transfer alongside physical technologies. This means African investments in education and research that is aligned to green industrialization needs, supported by innovation clusters that link universities, industry and government.

Conditions attached to climate finance and technology often contradict development priorities. These relationship dynamics reveal the complex interplay between structural factors, agency, and cooperation mechanisms. As one interviewee observed: "The extraction is happening in one part of the world and the benefit is happening in another part of the world, so the climate solution is super imposed on these already unequal relations."

2.2.4. Integrated governance systems

The analysis identified fundamental misalignments in climate governance structures. The UNFCCC process focuses primarily on increasing ambition in emissions reduction commitments, without creating sufficient enablers for implementation. African countries do not make development and transition decisions only on the basis of what the UNFCCC with its technology and financial mechanism has to offer, rather based on the 'real world' possibilities of supporting investments and development. As noted by one interviewee: "We spend so much of our energies in the negotiations, focusing on things that will not give us a long-term solution."

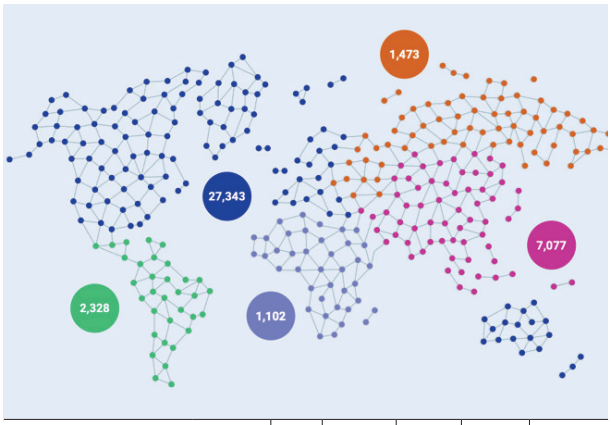
This misalignment extends to the disconnection between climate policy and broader economic governance systems. While the UNFCCC promotes increased ambition, the trade and financial architecture often works against implementation by imposing constraints on policy space, restricting access to affordable finance, and limiting technology access. Climate policy cannot be separated from broader economic governance. Reforms in trade, finance, and technology governance systems are essential for creating an enabling environment for climate action. The findings reveal a multifaceted implementation gap rooted in structural inequities within the cooperation ecosystem. While the UNFCCC effectively drives increased ambition, it has not effectively addressed the barriers to implementation faced by African countries.

Enhanced cooperation requires integration between climate governance and broader economic, trade, and development governance systems. Integration in this sense not suggestion streamlining of institutional arrangements or standardized policy frameworks, rather an opportunity to engage on how one policy regime is an enabler/disenablers towards achieving the Paris Agreement goals. Currently, these systems often operate in isolation or contradiction. The analysis highlighted the importance of policy coherence, across the ecosystem, addressing the underlying economic and developmental drivers of emissions, and a response that connects global, regional, and national systems.

The UNFCCC is primarily driven by the intergovernmental process, where Parties to the UNFCCC (1992), its Kyoto Protocol (1997) and the Paris Agreement in 2015 agree on global policy for climate action and support. Legally binding conduct of Parties is determined under this track through decisions taken at the annual Conference of Parties. The required action is however dependent on a number of actors with different mandates and interests beyond the environmental outcomes of the UNFCCC and its Paris Climate Agreement. (Figure 5)

The need for engagement by all levels of society, public and private, was first formalized in the UNFCCC process at COP17,

FIGURE 5. Actors recognized in the Global Climate Action Portal (UNFCCC, 2025)



	Cities	Regions	Companies	Organizations	Investers	Total
African Group	248	27	444	332	51	1,102
Asia-Pacific Group	541	29	50211	1 263	223	7,077
Eastern European Group	1,069	8	291	56	50	1,473
Latin American and Caribbean Group	797	104	1,058	307	62	2,328
Western European and Others Group	8,886	138	13,614	3,303	1 401	27,343
Total	11,541	346	23,428	5,261	1,787	39,323

which was agreed in parallel with the negotiation of what was to be the Paris Agreement. COP20 established the Lima-Paris Action Agenda where a 'coalition' of actors to support a new legal agreement was agreed. COP21 advanced the work, including the appointment of climate champions to ensure a durable connection between the Convention and the many voluntary and collaborative actions.

Since adoption of the Paris Agreement, global climate action has been encouraged and facilitated under the banner of the Marrakech Partnership for Global Climate Action, which was agreed in Morocco at COP22 and acknowledged at subsequent Conferences of the Parties. The Partnership brings together stakeholders working in key sectors and themes to spur enhanced climate ambition and action, and then recognizes that action, to inspire still greater effort.

This work has attracted significant activity with more than 39,323 entities participating as shown in **Figure 5**, even though Africa has a significantly low number of active participants at just over 1,100 organizations. The partnerships have been marred by environmental integrity concerns, backsliding on commitments, lack of transparency and accountability in reporting on commitments.

Figure 6 shows the relationships between various players in the climate action ecosystem, of which the UNFCCC has made progress in the negotiation process as well as engagement of Non-Party Stakeholders (NPS) through the Global Climate Action processes. The least understood/engaged component is

the international cooperation ecosystem. A recent analysis by the Stockholm Environment Institute (2023) found that only 23% of climate cooperation initiatives actively coordinate with trade and economic governance systems, highlighting the governance integration gap. Reorienting the UNFCCC to focus equally on implementation enablers alongside ambition, with connections to trade and financial systems, could help bridge the implementation gap.

FIGURE 6. The functioning of the UNFCCC system

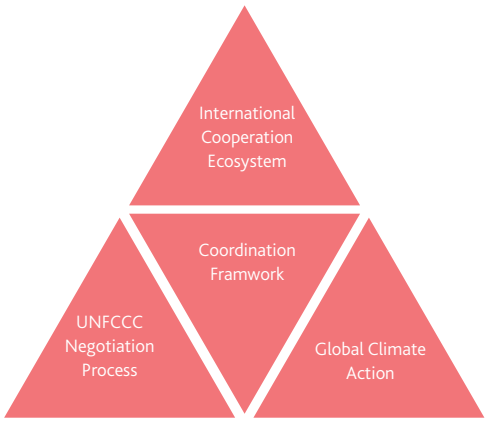
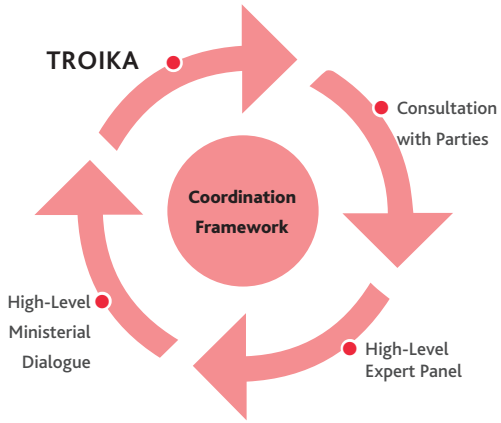


FIGURE 7. Mission 1.5 Coordination Framework



The UNFCCC has however neither been effective nor focused on providing guidance to the cooperation ecosystem, save for some non-specific guidance towards implementation to MDBs, particularly in the context of NCQG, and taking on board some guidance from minilateral platforms such as the G20. A potential approach for addressing these limitations to NPS and the cooperation ecosystem is presented in the schematic shown in **Figure 7**. Where a coordination framework is established under the guidance of the Troika (formed of past-present-next COP Presidencies), with a view of providing political guidance on enablers and disenablers of effective cooperation through a political platform, which is multilateral in nature (Ngwadla *et al*. 2024).

One interviewee suggested specific UNFCCC processes that could serve as entry points to guide the broader cooperation ecosystem: "The first, which has been front of mind for me is the Mission, 1.5 that was agreed in Dubai, the reason why I believe it's a good hook is that it's not a negotiating platform. It's about political signals that can come out of the UNFCCC, it's the presidencies, the Troika, making some pronouncements which hopefully can lend guidance to the 'real world'. The second hook being the just transition work programme, even though it's a negotiation item or it needs to have negotiated outcomes, I believe the scope allows us to have that discussion." There is an opportunity for the UNFCCC to facilitate the alignment of signals across the cooperation ecosystem, including the creation of specific workstreams on implementation enablers towards balanced partnership models across major cooperation frameworks.

2.2.5. Regional cooperation enhancement

The analysis revealed significant limitations in African agency within global climate governance. These include limited industrial policy vision, insufficient regional cooperation, governance and capacity constraints, and limited negotiating power. One interviewee highlighted the importance of long-term strategic vision: "We don't have a long-term context relevant type of an industrial policy or industrial plan. Often, it's the same kind of Fordist type of industrialization where you create these assemblies, and then you create some kind of value. You capture some kind of value there, and it moves..."

The African Continental Free Trade Area (AfCFTA) is a flagship project of Agenda 2063 aimed at creating a single African market for goods and services facilitated by free movement persons, capital, investment to deepen economic integration, promote and attain sustainable and inclusive socio-economic development, gender equality, industrialization, agricultural development, food security, and structural transformation. It operates across multiple phases and working areas, making it far more than a simple trade agreement. By 2023, 54 countries had signed the AfCFTA, with 46 having ratified it. Full implementation could increase intra-African trade by 33% and reduce external imports by $10 billion annually (UNECA, 2023).

The implementation of Phase I starting in 2021 focused on core trade areas in goods focusing on eliminating tariffs in 10 years, liberalization of service sectors including telecommunications, financial services, transport, and professional services; trade facilitation through streamlining customs procedures, reducing bureaucratic barriers, and harmonising standards, and the development of a rules of origin regime for products and service that can be traded freely across the region.

Phase II & III focus on deep Integration, also in progress, with work focused on creating a continental investment framework to protect and promote cross-border investments; establishment of common competition rules to prevent anti-competitive practices; harmonising Intellectual Property (IP) protection across the continent, and implementation of a digital trade protocol that promotes digital trade within Africa through harmonized rules, cross-border data flows, and creating a secure digital trade ecosystem; the last being a women and youth protocol for inclusive participation in continental trade.

On cross cutting areas, the focus is on industrial development through regional value chains and manufacturing capabilities, infrastructure integration through transport, energy, and Information and Communication Technology (ICT) networks, financial Integration including the Pan-African Payment and Settlement System (PAPSS). While the AfCFTA is central in the economic integration and increasing leverage of African economies through industrialization and shared markets, in respect of infrastructure directly relevant to climate change is the Programme for Infrastructure Development in Africa (PIDA) which focuses on mobilising resources to transform Africa with modern infrastructure, particularly energy, transport, cross-border water and ICT.

PIDA is grounded in regional and continental master plans and action plans as well as other relevant work undertaken by the African Union (AU), the regional economic communities (RECs), the regional and continental technical agencies (including the lake and river basin organizations (L/RBO) and regional power pools (PP) amongst others. PIDA's transformative potential is substantial, where Africa can reap savings on electricity production costs of $30 billion a year, or $850 billion through 2040, with power access rising to nearly 70% in 2040. Additionally, transport efficiency gains will be at least $172 billion in the African Regional Transport Integration Network (ARTIN), with the potential for much larger savings as trade corridors open (UNECA,2015).

It is generally understood that while AfCFTA shows tremendous potential with its comprehensive scope across trade, investment, digital integration, and inclusive development, successful implementation requires sustained political will, massive infrastructure investment, and coordinated action across all working areas to realize the vision of a truly integrated African economy. Furthermore, continued alignment of market expansion and industrial development will be largely delivered on the back of PIDA success and effective integration with the AfCFTA.

One interviewee emphasized the critical importance of regional cooperation: "A country like Kenya is trying, not quite succeeding. There needs to be a political union among Africans recognizing that you've got major weaknesses, and the only way that you can survive into this treacherous sort of future is if you band together and create that leverage that you're talking about. In the absence of that it becomes quite fragmented, just weaker, smaller you cannot talk about what most countries talk about exports oriented."

Enhanced cooperation must strengthen, complement, and build upon regional cooperation within Africa. Regional integration emerged as a critical enabler of more effective cooperation:

1. Regional Integration: Strengthening regional cooperation within Africa offers one of the most promising pathways for overcoming structural barriers and increasing leverage in negotiations. In respect of renewable energy and climate technologies, a trade regime for climate specific goods needs to be developed.
2. Enlightened Self-Interest: Regional cooperation opportunities exist but are difficult to realize due to national priorities and competition, which requires individual countries aligning technical assistance and development with regional objectives that capitalise on complementary capabilities across countries.
3. Shared infrastructure development that connects regional production and market systems leverage complementary resource utilization and associated efficiencies, and bargaining power. This would facilitate the creation of larger markets and pooling of resources.
4. Innovation and knowledge exchange platforms for continental technology development, learning and development of local technologies through development of regional renewable energy value chains that capitalize on complementary capabilities across countries.

3. CONCLUSIONS

This *Study* has employed a grounded theory approach to analyse pathways to enhanced cooperation for climate action in Africa. The findings reveal that effective cooperation requires transformation across multiple dimensions: partnership structures, financing approaches, technology relationships, governance systems, and regional cooperation. Enhancing cooperation goes beyond increasing resource flows or strengthening existing mechanisms - it requires fundamental reforms in power relations, economic models, and institutional structures (Newell & Taylor, 2020). The five pathways identified—power relations transformation, economic model reforms, financial system transformation, technology partnership development, and governance integration and regional cooperation—provide a comprehensive framework for enhancing cooperation.

A central finding of this research is the critical importance of integrated governance systems for effective climate action. The analysis revealed fundamental misalignments between climate governance structures and broader economic governance that systematically undermine implementation efforts (Dupont & Oberthür, 2015). While the UNFCCC process effectively drives increased ambition through NDCs and global targets, it operates largely in isolation from the economic, trade, and financial systems that determine countries' actual capacity to implement climate action (van Asselt, 2014). This is not necessarily consistent with the PA theory of change which recognise that the PA is not an 'implementation mechanism', rather a political/policy space that charts a vision for a broader set of actors to effect the transformation (Torres Gunfaus, *et al*. 2025). The UNFCCC system has the opportunity of a stronger engagement with the broader implementation community, as the fragmentation creates a situation where climate commitments are made without corresponding enablers being put in place through other institutional channels.

The disconnect is particularly pronounced for African countries, which must navigate competing signals from different governance systems. While the UNFCCC encourages ambitious emission reduction targets, the international trade regime often restricts the policy space needed for green industrialization, and the financial architecture imposes constraints that limit access

to affordable capital for renewable energy investments (Pegels & Lütkenhorst, 2014). This institutional incoherence explains much of the implementation gap that persists despite increasing climate ambition.

The research demonstrates that addressing climate change in Africa requires fundamentally rethinking how global governance systems interact and coordinate. Rather than treating climate governance as a separate domain, there is an urgent need for institutional mechanisms that ensure policy coherence across trade, finance, technology, and climate systems (Zelli & van Asselt, 2013). The analysis suggests that the UNFCCC could play a more active role in providing guidance to the broader cooperation ecosystem, moving beyond its current focus on ambition-setting to actively facilitate the implementation enablers that African countries need.

The study identified specific opportunities for enhanced governance integration, including the potential for coordination frameworks that connect climate presidencies (the Troika) with other international institutions, creating political platforms for addressing implementation barriers, and developing workstreams specifically focused on enablers rather than just ambition. The Mission 1.5 initiative and Just Transition Work Programme were highlighted as potential entry points for this expanded governance role.

Importantly, the findings reveal that regional cooperation serves as both a foundation for and beneficiary of enhanced international cooperation. The analysis shows that African countries lack the individual scale and bargaining power to effectively participate in global climate action or advance in technology value chains without stronger regional coordination (Aminga *et al.*, 2019). The African Continental Free Trade Area (AfCFTA) and Programme for Infrastructure Development in Africa (PIDA) emerge as critical platforms for building the regional integration that can enhance Africa's leverage in international climate cooperation while creating the market conditions needed for climate-compatible development.

The research contributes to our understanding of cooperation as both a means and an end - cooperation that is not only more effective but also more equitable, context-appropriate, and aligned with African development priorities. By transforming the foundation of cooperative relationships through integrated governance approaches, the global community can enable more meaningful progress toward both climate and development objectives in Africa. The findings reveal a multifaceted pathway to enhanced cooperation that requires fundamental reforms in power relations, economic models, financial systems, technology engagement, and crucially, governance structures that enable rather than constrain implementation.

These findings align with emerging literature on transformative approaches that emphasize structural change rather than incremental enhancement of existing systems (Newell & Taylor, 2020). They contribute to a deeper understanding of how cooperation can be reconfigured to better serve climate and development objectives simultaneously through more coherent and integrated governance systems that address the full spectrum of implementation challenges facing African countries in the global climate response.

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