

10th edition

CFC Africa Insights
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**Catalyzing Africa's
sustainable transition:**
Insights to impact a
climate-resilient future



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AFRICA



CFC AFRICA INSIGHTS :

Catalyzing Africa's sustainable transition:
Insights to impact a climate-resilient future



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ABBREVIATIONS

ACMI: African Carbon Markets Initiative

AfDB: African Development Bank

CAR: Central African Republic

CBAM: Carbon Border Adjustment Mechanism

CDM: Clean Development Mechanism

CFC: Casablanca Finance City

CFCA: Casablanca Finance City Authority

COP: UN Conference of the Parties

CPI: Climate Policy Initiative

DFI: Development finance institution

DFN: Debt-for-nature (swap)

DRC: Democratic Republic of Congo

ESG: Environmental, social, and governance

GCA: Global Center on Adaptation

GDP: Gross domestic product

GHG: Greenhouse gases

ICT: Information and communications technology

IEA: International Energy Agency

IETA: International Emissions Trading Association

IFC: International Financial Centre

ILS: Insurance-linked securities

IPCC: Intergovernmental Panel on Climate Change

IPP: Independent Power Producer

ITMO: Internationally Transferred Mitigation Outcome

JETP: Just Energy Transition Partnership

kWh: kilowatt-hour

LULUCF: Land use, land-use change, and forestry

MDB: Multilateral development bank

MENA: Middle East & North Africa

MoU: Memorandum of understanding

MtCO₂e: Million tonnes of carbon dioxide equivalents

mtpa: million tonnes per annum

NDC: Nationally Determined Contribution

ND-GAIN: Notre Dame Global Adaptation Initiative

ODA: Official development assistance

OHI: Ocean Health Index

p.a.: Per annum

PACM: Paris Agreement Credit Mechanism

PPP: Public-Private Partnership

REC: Regional Economic Community

SBM: Article 6.4 Supervisory Body

SDG: Sustainable Development Goal

SLB: Sustainability-linked bond

SME: Small and medium enterprises

UN: United Nations

UNDP: UN Development Programme

UNECA: UN Economic Commission for Africa

UNEP: UN Environment Programme

UNFCCC: UN Framework Convention on Climate Change

US\$: United States dollar

VCM: Voluntary carbon market

WEF: World Economic Forum

FOREWORDS

We are proud to launch this 10th edition of the Africa Insights, dedicated to sustainability, a critical issue for the continent's development agenda. This publication arrives at a pivotal moment, as Africa confronts the dual challenge of accelerating economic development while navigating the profound impacts of climate change. The imperative to align financial flows with climate and social priorities has never been greater.

This report delves into the intricate facets of sustainable finance in Africa, dissecting the unparalleled business opportunities that lie across diverse sectors, from infrastructure to climate-resilient agriculture. It explores strategies to efficiently mobilize the capital required for Africa's aspirations. Finally, it provides actionable recommendations to streamline the journey towards a net-zero transition, highlighting practical steps for policymakers and corporates.

Financial centers are instrumental in driving such transformation: we act as enablers and catalysts, providing clarity, market infrastructure, and talent ecosystems necessary to channel investments into bankable projects while facilitating responsible business practices and cross-border collaborations.

At CFC, our commitment to fostering green and sustainable finance is not simply a strategic choice but a fundamental conviction. Despite current headwinds, we believe that sustainability is the only pathway to long-term prosperity and resilience. As a leading financial hub, we are dedicated to leveraging our platform to mobilize capital, facilitate expertise, and champion positive impact solutions. Our mission is to shape a business-friendly landscape where sustainable innovation can flourish and scale.

The Africa Insights were crafted with a clear rationale: to serve as a cornerstone for knowledge and expertise sharing on the prevailing business trends shaping Africa's dynamics. By providing in-depth analysis, these reports aim to empower business leaders to navigate complexities and seize opportunities.

We trust this report will provide valuable guidance and inspire action. Join us in building a prosperous Africa!



Said Ibrahimi

CEO, Casablanca Finance City Authority



Noelani King Conradie

Managing Director,
Oxford Economics Africa

At Oxford Economics Africa, we are deeply aware of the unique challenges and remarkable opportunities facing the continent as it navigates the dual imperatives of economic development and environmental sustainability. In recent years, the discourse on sustainable finance has shifted from a niche concern to a strategic priority globally and increasingly across Africa. This report, *Catalyzing Africa's sustainable transition: Insights to impact a climate-resilient future*, offers a timely contribution to this conversation amid today's complex geopolitical and economic realities.

Africa stands at a critical crossroads. With its rich endowment of natural resources, youthful population, rapidly growing cities, and dynamic economies, the continent holds immense promise to pioneer a new model of green, inclusive growth. However, realising this potential requires reimagining how capital is deployed and scaled. Traditional financial mechanisms alone are insufficient. Instead, bold partnerships, innovative instruments, and coherent policy frameworks are essential to unlock the US\$ 2trn needed to

drive Africa's sustainable transformation by 2030.

Though Africa contributes minimally to global greenhouse gas emissions, it is disproportionately vulnerable to the effects of climate change. Addressing this vulnerability while advancing economic growth and development calls for financial innovation and resilient public-private collaboration. Encouragingly, sustainable finance across the continent is gaining momentum.

In collaboration with Casablanca Finance City, this report examines the current state and potential of sustainable finance in Africa. It identifies promising business opportunities and outlines the essential steps to accelerate green and inclusive investment. The continent offers an array of interrelated commercial avenues that intersect sustainable energy systems, blue economy initiatives, climate-smart agriculture, resilient infrastructure, and critical mineral mining and beneficiation.

Through rigorous analysis, this study highlights the gaps and structural barriers to deploying sustainable finance and the efforts underway across the continent to address these issues. These efforts range from blended finance, green bonds, and debt-for-nature swaps to nascent carbon credit markets and evolving regulatory frameworks. It also underscores the vital role of international financial centres in bridging the gap between global investors and African opportunities to channel capital where it is truly impactful, reaching the places and people that need it most.

This report provides a roadmap for change. Drawing on in-depth research and expert insights, it demonstrates how financial innovations can help channel more capital into projects that deliver both measurable environmental impact and long-term economic value. With the right policy signals, greater transparency, and effective de-risking mechanisms, Africa can become a magnet for sustainable investment not just to withstand the climate crisis, but to thrive through it.

Sustainable finance is not merely a climate imperative but a development necessity. As climate risks intensify, Africa must urgently mobilise capital to advance its adaptation, mitigation, and development goals. Realising this ambition will require coordinated action across governments, financial institutions, international partners, multilateral agencies, and the private sector. With bold leadership, innovative tools, and supportive ecosystems, the continent can chart a path toward a more inclusive, resilient, and sustainable global economy. Our goal at Oxford Economics Africa is to equip decision-makers with data-driven insights and a grounded understanding of local realities. If investors, policymakers, and development partners act with urgency and vision, they can accelerate Africa's journey towards an environmentally and socio-economically sustainable future.

EXECUTIVE SUMMARY

Africa stands at a critical juncture in its development path, facing mounting challenges from climate change while also holding tremendous potential to lead a global green transformation. Although the continent contributes less than 3.0% to global greenhouse gas emissions, it is among the most vulnerable to climate shocks and suffers from significant deficits in infrastructure, government finances, and access to international capital. At the same time, widespread, multidimensional poverty and inadequate private sector investment restrain environmentally sustainable development and inclusive economic growth on the continent.

High perceived risks, policy and regulatory barriers, and insufficient incentives, among other factors, often constrain sustainable business opportunities. In addition, limited institutional and human resources capacities, poor project preparation, and a shortage of commercially viable climate mitigation and adaptation projects also hinder commercial investment. These development challenges are exacerbated by rising geopolitical uncertainty, where global conflicts, trade disruptions, and wavering multilateral support for climate action compound existing barriers to Africa's sustainable and inclusive growth.

Despite these obstacles, sustainable finance merging capital with social and environmental sustainability presents a unique opportunity for businesses to advance low-carbon, climate-resilient development. In this context, the report offers a comprehensive assessment of the sustainable finance landscape in Africa, identifies business opportunities for green and inclusive development, and explores mechanisms to mobilise the capital needed for the continent's long-term sustainability and progress in an increasingly fragmented world.

SUSTAINABLE FINANCE IN AFRICA

Africa requires at least US\$ 190bn in climate finance annually. Yet, it receives less than US\$ 55bn a year, equating to only 3.3% of the global total. Nearly half of this goes to just 10 African countries, often not the most climate-vulnerable nations. Public sources dominate, the bulk of which emanate from multilateral development finance institutions, while private finance remains marginal, albeit growing. The continent relies heavily on grants and concessional debt, while most adaptation efforts are underfunded despite being critically needed.

Investment is also uneven across sectors, with electrical energy receiving the largest share. Global pledges, such as the COP29 new US\$ 300bn p.a. finance plan to support developing nations in their climate efforts, represent steps forward, but they remain notably inadequate. Africa's environmentally sustainable development hinges on closing its financing gap through innovative mechanisms, appropriate policy settings, stronger public-private cooperation, and increased global commitment to climate justice.

BUSINESS OPPORTUNITIES TO CATALYSE SUSTAINABLE AND INCLUSIVE GROWTH

Africa's unique combination of abundant natural resources, sharp population growth, increasing demand for goods and services, and pressing sustainability challenges positions it as a prime destination for impactful and profitable investments across a spectrum of interconnected, future-orientated sectors. Five major opportunity areas can catalyse Africa's sustainable and inclusive growth, each containing several potential commercial prospects for practical consideration.

First, environmentally **sustainable energy** systems are critical for expanding electricity access to around 600mn Africans living without it, powering industrial development, and reducing the continent's reliance on fossil fuels and traditional biomass. Africa holds vast renewable energy potential, especially in solar, wind, and hydropower, but it needs major upfront investments to meet future energy demand for electrification on a sustainable basis.

Second, the **blue economy** including fisheries, shipping, marine tourism, and ocean energy offers coastal and inland countries untapped potential to combat degradation from overfishing, development, and pollution. It is estimated that blue economy initiatives contribute around US\$ 300bn to Africa's economy and support nearly 50mn jobs, while capital investments in climate-resilient water and sanitation systems alone can yield an economic benefit of US\$ 7.00 for every US\$ 1.00 investment.

The third opportunity relates to the necessity of **climate-smart agriculture** to boost food security, improve livelihoods, and reduce environmental degradation. Over 95% of Africa's agriculture depends on rainfall, making it highly vulnerable to climate variability. Therefore, investments in agri-tech, irrigation, organic fertilisers, climate-resilient crops, and water management present promising pathways to reduce the continent's reliance on imports and foreign aid, with business opportunities reinforced by Africa holding a quarter of the world's arable land.

Fourth, **climate-resilient infrastructure** across transport, energy, and digital networks is essential to withstand extreme weather events and support urbanisation, while promoting conducive investment environments through structural, sustainability-linked development.

Finally, the continent's rich endowment of **critical minerals** (i.e., holding around 30% of proven reserves) positions it to become a leader in the global green technology supply chain, provided there is sufficient investment in local refineries, value addition, and supportive policy frameworks to transition away from a primary reliance on unprocessed mineral exports.

MOBILISING CAPITAL FOR AFRICA'S SUSTAINABLE DEVELOPMENT

Most African countries grapple with high borrowing costs and limited access to foreign capital due to higher perceived risks coupled with weaker credit ratings, liquidity concerns, underdeveloped domestic financial markets, and large-scale development needs that contribute to high sovereign debt burdens. Moreover, it is generally more difficult to secure commercial investments in climate adaptation infrastructure and technologies than those in mitigation measures, often due to challenges in demonstrating a clear return on investment over the short to medium term. Even so, efforts are underway to develop innovative financing mechanisms to attract private capital into adaptation.

At the same time, businesses are progressively realising the need to invest in actions to protect their assets, operations, and supply chains against the impacts of climate change.

With constrained fiscal space, African governments must attract private capital to bridge the climate investment gap through innovative financing mechanisms. Blended finance, different types of sustainability bonds, debt-for-nature swaps, green equity, impact investing, and carbon credit markets are among such mechanisms, besides insurance-linked securities, microfinance, and microinsurance products. Environmentally sustainable business opportunities are often funded through a combination of instruments, depending on the size and complexity of practically viable projects. Blended finance, in particular, has shown promise in de-risking investments and crowding-in private capital by combining concessional and commercial finance. Africa accounted for over 41% of global blended finance deals for climate action between 2016 and 2021. On the other hand, it has been estimated that green, blue, social, and sustainability-linked bonds may generate around US\$ 3trn in climate finance opportunities in Africa between 2020 and 2030.

Africa's carbon credit markets remain underdeveloped but hold considerable promise. The continent's global share in these markets is expected to rise from 10% in 2021 to 25% or US\$ 7bn by 2030. With the right policy frameworks, investment in monitoring and verification infrastructure, and support for project developers, African countries can generate substantial revenue through compliance and voluntary carbon markets. This revenue can finance local adaptation and mitigation projects, enhance carbon sequestration potentials, create green jobs, and incentivise environmental conservation.

Yet, structural constraints such as weak project preparation, inadequate policy and regulatory frameworks, lacking investment incentives, and insufficient capacity in public institutions continue to limit progress. Only 20% of Africa's infrastructure projects in various planning stages successfully reach financial close. Therefore, the successful deployment of sustainable finance on the continent requires an ecosystem of support. It needs to be reinforced by technical assistance in the form of capacity building, skills development, technology transfer, and awareness creation. Project preparatory support is similarly important to enhance project viability, reduce perceived investment risks, and ensure that businesses and institutions have the information, expertise, infrastructure, and confidence to fund, implement, and scale sustainable solutions effectively.

As hubs for regional and global business activities, international financial centres (IFCs) can play a catalytic role in aggregating capital, offering financial innovation, and promoting transparency and environmental, social, and governance (ESG) compliance to attract green investment flows into Africa. Moreover, IFCs can support the deployment of sustainable finance by fostering the necessary expertise, capacity building, technology transfer, and public-private partnerships (PPPs). Additionally, these centres help to attract capital into sustainable business opportunities through policy and regulatory incentives, creating talent pools, and advancing cross-border collaboration among investors, governments, development partners, and multilateral institutions.

BUSINESS RECOMMENDATIONS FOR NET-ZERO TRANSITIONS

Through policy and political support, the private sector needs long-term assurance that investments in climate-resilient infrastructure will be safeguarded and that the expected returns will be realised over project lifetimes. At the same time, it is vital to ensure that structural shifts to environmentally sustainable economies do not compromise access to resources, affordability, and much-needed socio-economic development. Consequently, African countries need significant financial resources under grants and highly concessional terms if they are to progress to low-carbon economies without exacerbating their debt burdens, improve resilience against adverse weather conditions, reinforce inclusive socio-economic development, and supply the world with key transition minerals. This study offers several interrelated recommendations to support the private sector in taking advantage of sustainable business opportunities on the continent, summarised in **Figure 1**.

Figure 1: Business recommendations



Support enabling environments for increased private investment, collaboration, and PPPs, including by mainstreaming climate resilience into policy and implementation frameworks



Reinforce project preparation capabilities and investors' visibility of viable project pipelines



Mobilise increased public and private concessionary capital through innovative sustainable financing mechanisms to help close funding gaps, free up fiscal space, and implement NDCs



Take advantage of and deploy the sustainable financing mechanisms despite recent emerging geopolitical dislocations from combating global climate change



Establish or expand functional national and regional carbon credit markets, while ensuring alignment with Article 6.4 of the Paris Agreement



Leverage IFCs to streamline the deployment of sustainable finance mechanisms into bankable opportunities



Promote the role of the diaspora and remittances to support sustainable development



Create platforms to match skills demand and supply with sustainable business prospects



Address data shortcomings and reinforce disaster risk reduction and management systems



Conduct ongoing capacity building, awareness creation, and technology transfer to ensure effective climate action

UNLOCKING SUSTAINABLE GROWTH

AFRICA'S CLIMATE CHANGE PARADOX



Among the most vulnerable and least equipped to adapt to global climate change, despite contributing the least to it.



Abundant natural resources, but suffers from severe multidimensional poverty, insufficient value addition, and a large reliance on traditional biomass and fossil fuels for energy.



High debt, constrained fiscal space, and limited access to international capital markets hamper governments ability to fund climate change mitigation and adaptation efforts.



International climate finance pledges have been the greatest to Africa, yet only a fraction of these have been disbursed – worsened by geopolitical disruptions and pressure on official development assistance

US\$ 2trn required to combat climate change by 2030

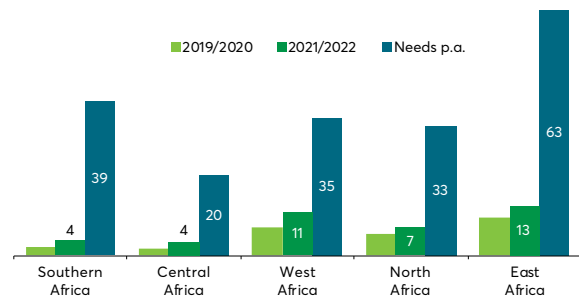
US\$ 190bn p.a.
Climate financing
needs

US\$ 52bn
Climate finance
inflows in 2022

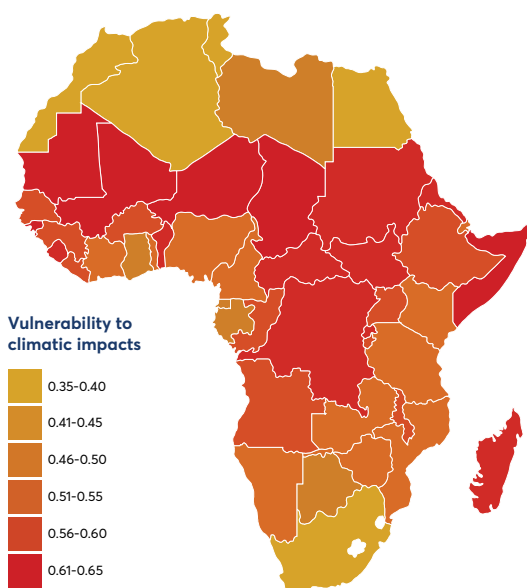
~ US\$ 138bn p.a.
Shortfall

Africa receives only around 3.3% of total global climate finance

Sustainability financing flows vs needs per region
US\$ bn



AN ARRAY OF INTERRELATED BUSINESS OPPORTUNITIES EXIST TO HELP CLOSE THE CONTINENT'S CLIMATE FINANCE GAP



SUSTAINABLE ENERGY SYSTEMS

Fossil fuels supply about 75% of Africa's electricity, yet 43% of its population still lacks access. The continent needs 300 GW of renewable energy electrical generation capacity by 2030 to transition to a low-carbon and inclusive future.



BLUE ECONOMY

Blue economy initiatives contribute around US\$ 300bn to Africa's economy and supports nearly 50mn jobs. Every US\$ 1 invested in climate-resilient water and sanitation systems alone yield an economic benefit of US\$ 7.



CLIMATE SMART AGRICULTURE

Over 95% of Africa's agriculture is rain-fed, leaving it highly vulnerable to climate variability. Despite having 25% of the world's arable land, Africa produces just 10% of global agricultural output, adding 20% to 30% to its real GDP.



CLIMATE RESILIENT INFRASTRUCTURE

By 2100, 13 of the world's 20 largest megacities are expected to be in Africa, compounding the need for infrastructure and environmentally sustainable cities.

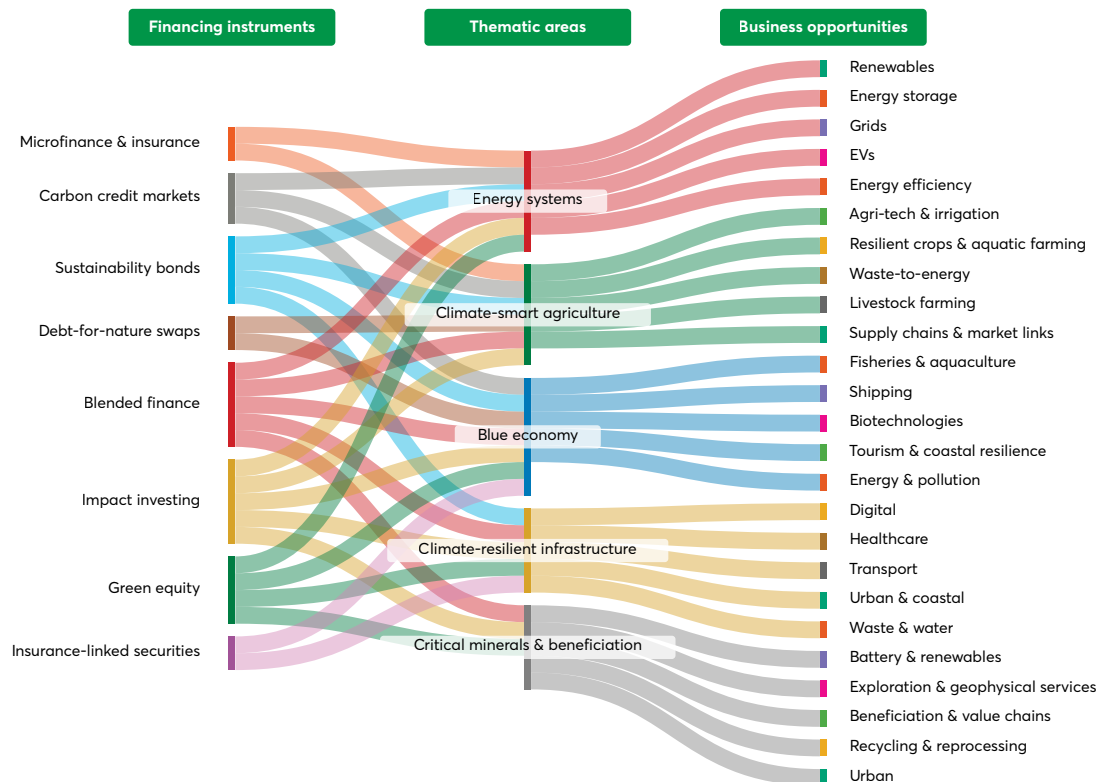


CRITICAL MINERAL SUPPLY CHAINS

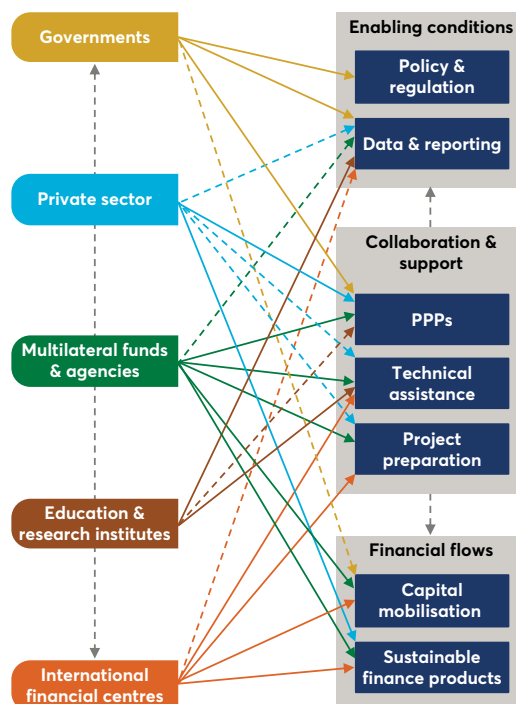
Africa holds roughly 30% of proven critical mineral reserves for green technologies and around 40% of global reserves of aluminium, chromium, cobalt, manganese, and platinum.

INVESTING IN AFRICA'S CLIMATE-RESILIENT AND INCLUSIVE FUTURE

VARIOUS SUSTAINABLE FINANCING MECHANISMS EXIST TO REALISE VIABLE LOW-CARBON, CLIMATE RESILIENT BUSINESS OPPORTUNITIES



THE SUCCESSFUL DEPLOYMENT OF SUSTAINABLE FINANCE REQUIRES AN ECOSYSTEM OF SUPPORT AND MULTI-STAKEHOLDER COLLABORATION



*Note: Dashed lines indicate secondary support linkages, and/or cooperation between stakeholders.



INTRODUCTION

INTRODUCTION

Africa is disproportionately affected by climate change, despite contributing the least to its causes. The continent faces complex challenges, including high vulnerability and low adaptive capacity to the effects of climate change and disasters. Moreover, poverty remains rife and multi-dimensional in spite of an abundance of natural resources. Most African governments also have elevated debt burdens, limited fiscal space for climate action, and major barriers to accessing international capital markets.

These challenges are compounded by structural underdevelopment across much of the continent, policy and regulatory frameworks that are not conducive to greater or more diversified private investment, and inadequate, costly international climate finance disbursements all amid escalating geopolitical disruptions presently originating from the developed world. Conflicts, tariffs, trade uncertainty, cooling investor sentiment, higher prices, and multilateral dislocations such as declining commitments to official development assistance (ODA) and climate action further hinder Africa's prospects for environmentally sustainable and inclusive growth.

Collectively, these obstacles complicate doing business and expanding investment opportunities on the continent. However, by aligning capital flows with environmental, social, and governance (ESG) objectives, sustainable finance presents an avenue for both public and private sector actors to help overcome the complex challenges of Africa's transition to low-carbon, climate-resilient, inclusive, and thriving economies.

The remainder of this report is structured as follows:

- **Chapter 2** contextualises Africa's climate change paradox and sustainable finance landscape, including a comparison of funding needs and current inflows.
- **Chapter 3** classifies, describes, and prioritises business opportunities that can enable Africa to leapfrog towards environmentally sustainable and inclusive growth along five thematic areas: sustainable energy systems, opportunities in the blue economy, climate-smart agriculture, climate-resilient infrastructure, and critical mineral mining and beneficiation. Each area is illustrated with relevant success stories.
- **Chapter 4** examines the need to mobilise increased concessional private capital for environmentally sustainable development, especially given the fiscal constraints of most African governments, augmented by case studies. It analyses innovative climate finance mechanisms in the context of Africa's development circumstances and the ecosystem of multi-stakeholder cooperation and support required for the successful deployment thereof. Carbon credit markets in Africa are additionally explored in detail, while the role of international financial centres (IFCs) in promoting sustainable economic growth and development transitions are evaluated.
- **Chapter 5** discusses the future macroeconomic implications associated with transitioning to net-zero carbon emissions and offers targeted recommendations to help businesses navigate decarbonisation efforts.
- **Chapter 6** concludes the report.

02

SUSTAINABLE
FINANCE IN AFRICA

SUSTAINABLE FINANCE IN AFRICA

Africa faces a quadruple paradox in the context of climate change. First, despite being the least responsible for global climate change, African countries are among the most vulnerable to its effects and have some of the weakest capabilities to adapt to its impacts, such as droughts, floods, and rising temperatures. Second, the continent has abundant natural resources to meet its energy needs, yet it grapples with severe energy poverty with a large reliance on traditional biomass and fossil fuels. Third, most African governments have highly constrained fiscal space and limited access to international capital markets, which hampers their capacity to finance climate change mitigation and adaptation initiatives. This is exacerbated under prevailing geopolitical circumstances driving deglobalisation trends, a potential shift in global commitments to the Paris Agreement, and pressure on official development assistance (refer to [Chapter 4](#)).

Fourth, international climate finance pledges have been the greatest - and most important - for Africa. However, only a fraction of global funding commitments have reached the nation-states as they have struggled to access the financial resources needed to adapt to a changing climate and transition to environmentally sustainable economies.

Sustainable finance is crucial to overcoming these paradoxes by unlocking capital for climate-resilient infrastructure, de-risking investments, and fostering inclusive economic growth. Mobilising public and private funding through innovative financing mechanisms can help Africa transition to a low-carbon, disaster-resistant, and future-proof environment while addressing its development needs. This chapter elaborates on the climate change paradox facing Africa and examines the environmentally sustainable finance landscape by considering the continent's funding needs versus current inflows.

2.1 Africa's Looming Climate Crisis

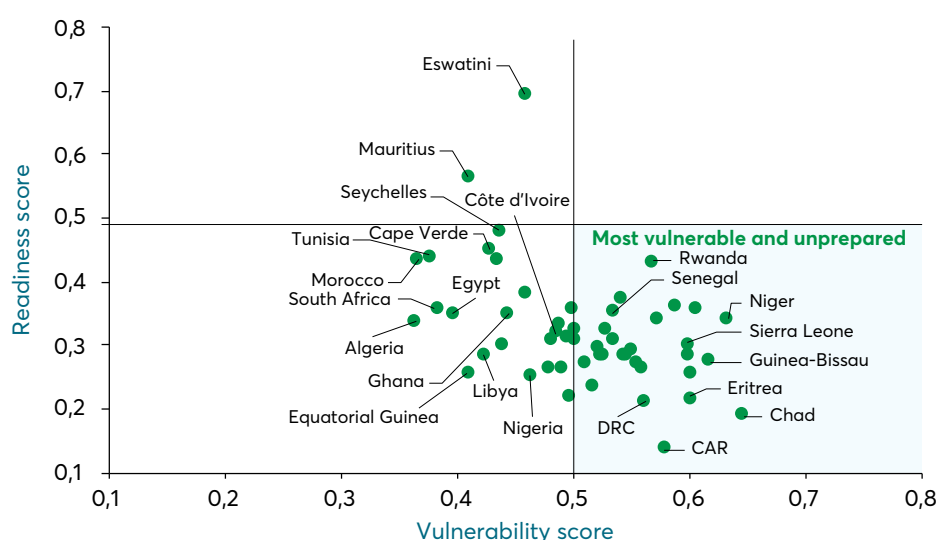
Not a single country in the world will emerge unscathed by climate change. According to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), the rate of temperature increase has been more rapid across Africa in comparison to global averages, while the observed surges in hot extremes (i.e., heat waves) and decreases in cold extremes will continue to accelerate. Furthermore, the frequency and intensity of heavy precipitation events are projected to increase almost everywhere across Africa, while climate change is a leading driver of loss and damage across the continent that exceeds current and projected adaptation limits (IPCC, 2022).

Notwithstanding the adverse ramifications of climate change across the continent, regional vulnerabilities and abilities to combat climate change are heavily skewed. The African continent is undoubtedly the most susceptible to climate change despite accounting for less than 3.0% of the world's energy-related carbon emissions (IEA, 2023). The United Nations Economic Commission for Africa (UNECA) noted that Africa houses 17 of the 20 nations most threatened by climate change (UNECA, 2023a). Based on estimates from Burke et al. (2015), the Climate Policy Initiative (CPI) noted that Africa's cumulative gross domestic product (GDP) could decline by between 14% and 20% by 2050 under the low warming to business-as-usual scenario and by 34% to 80% by 2100 under the low warming to worst-case scenario (CPI, 2024a). Subsequently, without immediate and comprehensive action, Africa's future economic costs will far overshoot the climate finance needed today.

Other climate cost metrics listed by CPI (2024a) include: 76mn individuals at risk of disease and death, 78mn people subject to food insecurity, and 105mn internal climate migrants due to extreme weather conditions, with West and East Africa suffering the most adverse consequences.

Uncoincidentally, West and East Africa also house numerous vulnerable and unprepared nations to climatic risks on the continent. **Figure 2** shows the vulnerability and readiness scores for 53 African states according to the Notre Dame Global Adaptation Initiative (ND-GAIN) in 2022. The vulnerability score – with 1.0 being the worst – measures a country's sensitivity and exposure to the impact of climate change. Readiness – where 1.0 is the best score – indicates a country's transformative capacity to convert investments into climate action.

Figure 2: African country vulnerability and readiness scores



Source: ND-GAIN (2022)

In terms of vulnerability, Chad (0.65), Niger (0.63), Guinea-Bissau (0.62), and Somalia (0.61) registered the worst scores in Africa in 2022 – all above the continental average of 0.51. Conversely, four North African nations Algeria (0.36), Morocco (0.37), Tunisia (0.38), and Egypt (0.40) were among the top five least vulnerable in Africa, with South Africa (0.38) claiming fourth place. A mere eight African nations placed above the global average of 0.43. Apart from those already listed with the best scores on the continent, other noteworthy scores include Mauritius (0.41), Equatorial Guinea (0.41), and Libya (0.42).

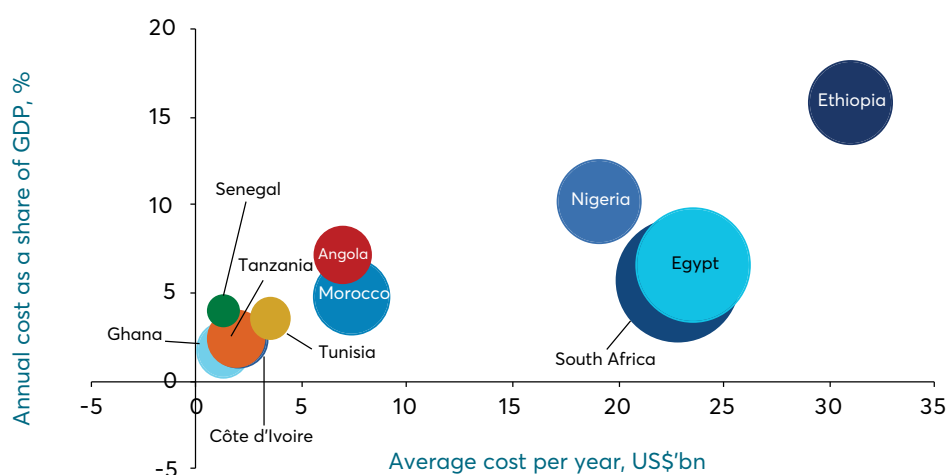
On the readiness front, the Central African Republic (CAR) – with a score of 0.14 – is considered the most unprepared, followed by Chad (0.19), the Democratic Republic of Congo (DRC) (0.21), and Eritrea (0.21). Of the 53 nations, 29 had better readiness scores than the continental average of 0.32. This is especially concerning given a global average readiness score of 0.43 in 2022, with only five African states recording higher positions: Eswatini (0.69), Mauritius (0.57), Seychelles (0.48), Cape Verde (0.45), and Tunisia (0.44).

2.2 Immense Climate Financing Needs versus Insufficient Inflows

According to UNECA (2023b), implementing Africa's collective Nationally Determined Contributions (NDCs) to advance the global effort to combat climate change requires almost US\$ 3trn, including around US\$ 2.5trn between 2020 and 2030, translating into an average of US\$ 250bn a year.

Based on revised NDCs, CPI (2024a) more recently estimated Africa's climate needs at US\$ 2.0trn until 2030 (or approximately US\$ 190bn p.a.). Africa's cumulative GDP (in nominal US\$ terms) stood at US\$ 2.9trn in 2024, implying that a sizable portion of the continent's economy needs to be diverted to sustainable financing. Moreover, the US\$ 300bn New Collective Quantified Goal on Climate Finance for all developing nations agreed to at the 29th Conference of the Parties (COP29) would only be enough to cover Africa's total financing needs. The bulk of the continent's financing needs are related to mitigation projects at US\$ 1.6trn, while US\$ 579.2bn is needed for adaptation measures and US\$ 242.8bn for dual benefit initiatives (CPI, 2022). Figure 3 shows the annual average cost of selected NDCs per year throughout implementation and this cost as a share of the country's GDP in 2024 (in nominal US\$ terms).

Figure 3: Average annual financing needs and share of GDP



Sources: CPI (2024b); Oxford Economics Africa (2025)

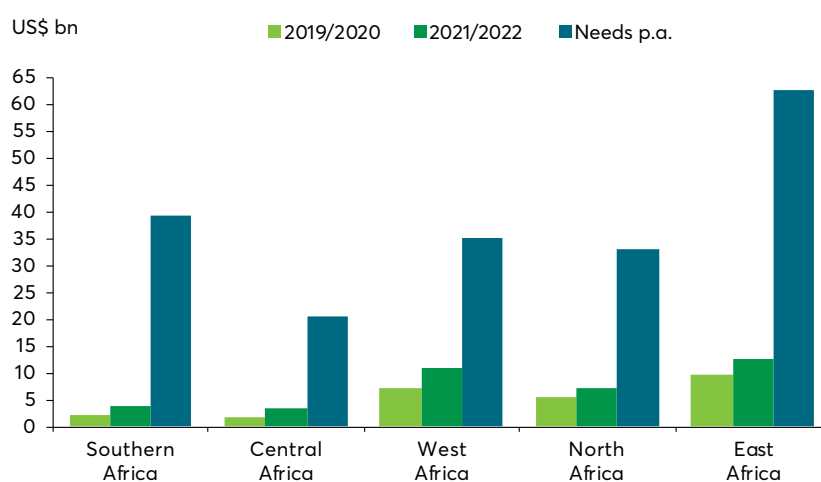
While most of Africa's financing needs are earmarked for mitigation purposes, the continent's adaptation requirements are probably underestimated due to a lack of data and technical expertise to accurately determine the cost of adaptation measures (CPI, 2024a). A mere 28 African countries provided adaptation cost estimates in their NDCs (GCA, 2024a). Adaptation funding is arguably more critical in the African context, given the continent's vulnerability to extreme weather events and minimal contribution to global carbon emissions. Nonetheless, Figure 3 demonstrates that pursuing a just transition towards sustainable economies without financing support will be difficult, even for Africa's heavyweight economies (i.e., those that should have the greatest capacity to attain their respective climate commitments).

Turning to sustainable financing inflows, an even more concerning image emerges. According to CPI (2024a), climate finance flows to Africa stood at US\$ 52.1bn in 2022 up from US\$ 35.3bn recorded in 2021 and the first time the continent crossed the US\$ 50.0bn mark. Despite the encouraging uptick, the inflows in 2022 remained well below the US\$ 190.0bn required on an annual basis. Moreover, Africa receives only around 3.3% of total global climate finance. Figure 4 displays the inflows in 2019/2020 and 2021/2022 compared with regional financing needs.

All regions across Africa remain significantly underfunded, with mitigation and adaptation investments facing a deficit of roughly 80% in 2021/2022. CPI (2024a) estimated that mitigation needs (US\$ 112bn) are higher than those for adaptation (US\$ 70bn), while dual-benefit activities require an additional US\$ 9bn a need which was met in 2021/2022. The segment of adaptation investment in Africa's cumulative finance flows was higher than in other regions, receiving 32.0% in 2021/2022 (down from 39.0% in 2019/2020). This decline is most likely due to an increase in dual-benefit financing, which points to a more systemic approach to climate action on the continent.

When dissecting the sources of finance by instrument and actor, it becomes evident that public finance retains its dominant position while private sector sources account for a minimal share. In 2021/2022, public finance inflows amounted to US\$ 35.7bn (81.8% of all funding) up from US\$ 25.3bn in 2019/2020 while private funding stood at US\$ 8.0bn (18.2% of all funding) in 2021/2022 versus US\$ 4.2bn in 2019/2020 (CPI, 2024a). Although public financing tends to dominate in less developed regions as opposed to private funding in more advanced areas, the public sector overwhelmingly carries the financing burden in Africa compared with other regions such as East Asia and the Pacific (61.0%) or Latin America and the Caribbean (51.0%).

Figure 4: Sustainability financing versus needs per region



Source: CPI (2024a)

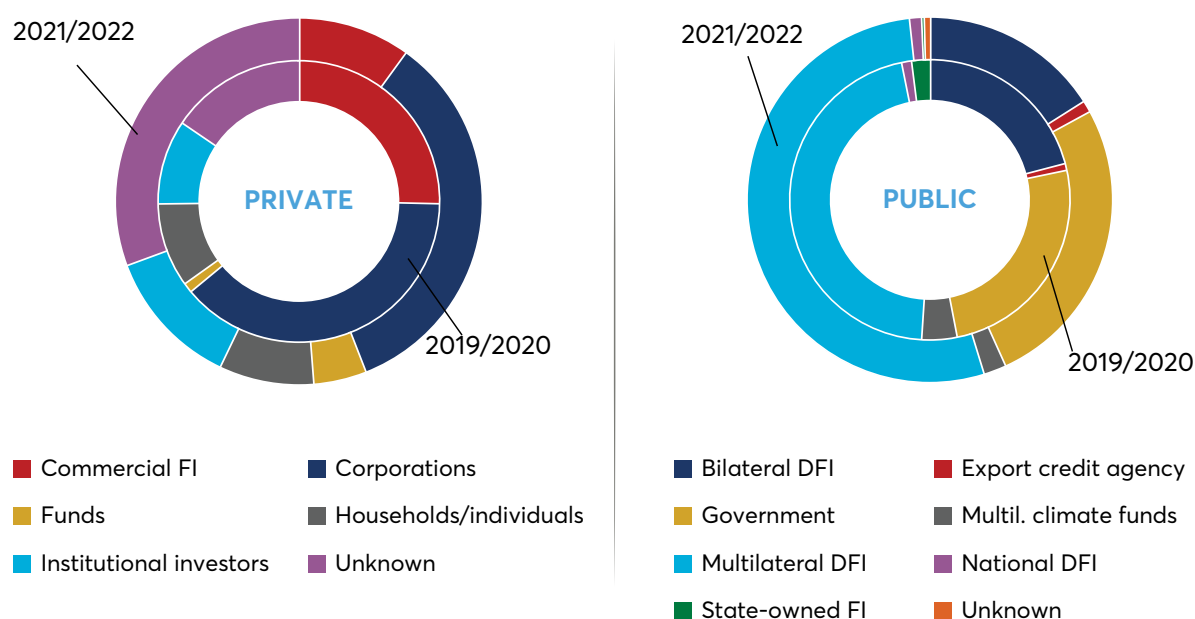
¹ Includes national, bilateral, and multilateral development finance institutions, international and domestic governments, multilateral climate funds, and export credit agencies.

² Includes institutional investors, households and individuals, corporations, funds and commercial financial institutions.

Figure 5 segregates private and public funding by instrument in 2019/2020 and 2020/2021. Within the public sector, multilateral development finance institutions (DFI) accounted for the lion's share in 2021/2022 at US\$ 18.9bn or 43.4% of all funding provided during the period. This was followed by national governments at US\$ 9.4bn, of which international governments provided US\$ 8.6bn, while local government provisions stood at a mere US\$ 0.8bn.

Other notable public sector financiers included bilateral DFIs (US\$ 5.7bn), multilateral climate funds (US\$ 715.7m), and national DFIs (US\$ 381.9m). Regarding private sector funding tracked by CPI, corporations had the biggest share at US\$ 2.7bn (6.2% of all funding) in 2021/2022, followed by unknown sources at US\$ 2.4bn (5.6%). Other private funding sources accounted for negligible shares of cumulative climate financing contributions in 2021/2022. Institutional investors provided a mere US\$ 975.6m (2.2% of all funding) while commercial financial institutions (FI) contributed US\$ 797.7m (1.8%).

Figure 5: Private and public sector funding by instrument

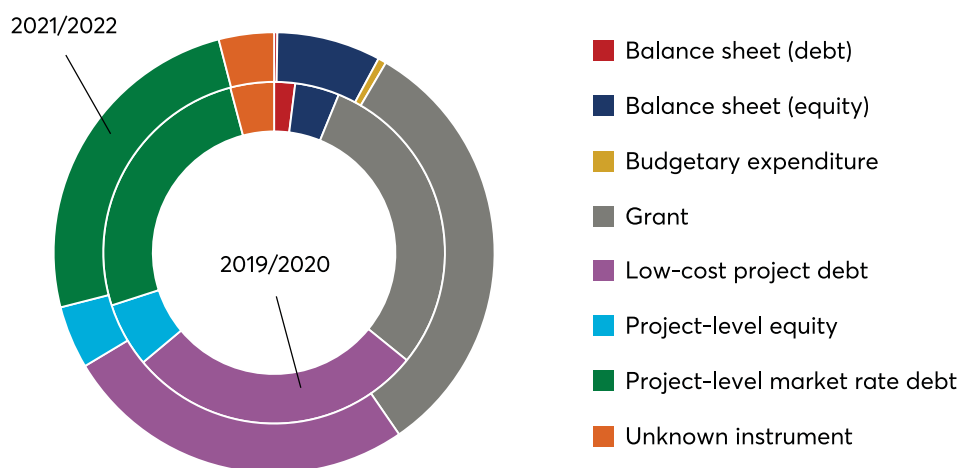


Source: CPI (2024a)

Considering the split between funding instruments is also necessary, given the strained state of fiscal positions across Africa. NDCs distinguish between unconditional and conditional measures; in other words, self-funded (unconditional) and funding through external support (conditional).

For instance, Kenya's NDC states: «Kenya will mobilise resources to fund around 13% of the total (US\$ 62bn) budget,» whereas Ethiopia's statement notes that 80% of the country's mitigation and adaptation contributions are conditional. This demonstrates a clear difference in the capabilities of African nations to fund their climate ambitions, which is also evident in the disaggregation of funding by instrument, as shown in **Figure 6**.

Figure 6: Composition of sustainability financing by instrument



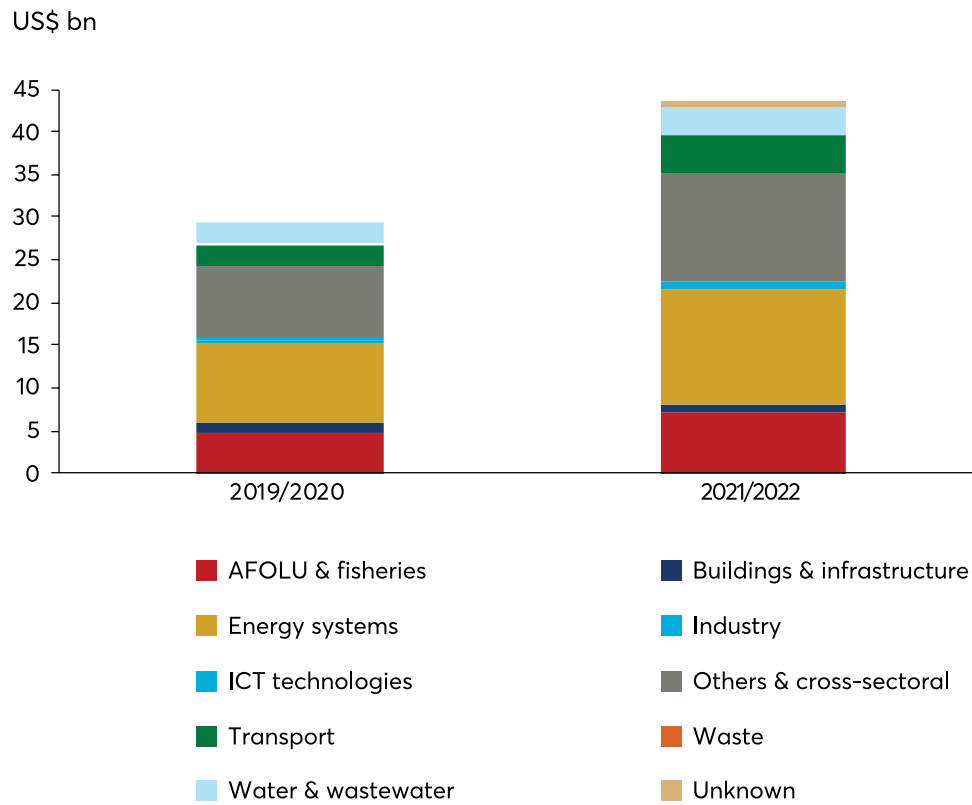
Source: CPI (2024a)

Grant funding, low-cost project debt, and project-level market rate debt continue to dominate Africa's climate financing landscape. Grants rose to US\$ 14.0bn in 2021/2022 (from US\$ 8.8bn in 2019/2020) while low-cost project debt stood at US\$ 11.4bn in 2021/2022 (US\$ 8.3bn in 2019/2020). Institutional investors (100.0% of allocations), international governments (81.0%) and multilateral climate funds (59.0%) are typically the largest providers of grants, while export credit agencies (100.0%), bilateral (67.0%) and multilateral (34.0%) DFIs tend to provide low-cost project debt. This suggests an ongoing and entrenched reliance on donor funding, even though the availability of low-cost financing instruments is rising.

According to CPI (2024a), energy systems across Africa received the largest sustainable financial inflows in 2021/2022 at US\$ 13.7bn. This was followed by cross-sectoral & other sectors (US\$ 12.8bn); agriculture, forestry, other land uses (AFOLU), and fisheries (US\$ 7.0bn); transport (US\$ 4.5bn); and water & wastewater (US\$ 3.2bn). Other sectors, such as buildings & infrastructure, industry, information & communications technology (ICT), and waste received less than US\$ 1.0bn over the same period. **Figure 7** provides a breakdown of cumulative funding per sector in 2019/2020 and 2021/2022.

Africa's sustainable financing gap remains immense despite rising inflows. External assistance has become crucial considering the critical need for development in Africa, given the dire state of basic services in the context of an expanding population and widespread multidimensional poverty. Frequent adverse weather events have increased pressure on domestic fiscal resources amid highly constrained government finances. Moreover, geopolitical developments have cast another shadow over the global pursuit of climate change action. Despite a strenuous but somewhat positive COP29, Africa's sustainable finance landscape will likely come under pressure due to the diversion of spending in key donor regions.

Figure 7: Division of funding per sector in 2019/2020 and 2021/2022



Source: CPI (2024a)

COP29 Climate Finance Commitments: A Step Forward, But Still a Long Way to Go

At COP29, a new US\$ 300bn p.a. core climate finance plan was introduced to support developing nations in their climate efforts. Hailed by some as a breakthrough, critics argue the agreement falls significantly short of what is required.

- **Targeted annual climate funding:**

Up to US\$ 1.3trn p.a. by 2035, to be mobilised from public and private sources. Regardless of its inadequacy from developing nations' perspectives, the new deal still marks a move in the right direction.

- **Voluntary contributions:**

Even developing countries are urged to contribute voluntarily a contentious point among climate-vulnerable nations.

- **Loss & Damage Fund:**

The fund, first agreed at COP27 in Egypt, will be operationalised, with US\$ 765.6mn pledged by 27 contributors as of March 2025, which is also deemed wholly insufficient by developing countries to address the unavoidable consequences of climate change, especially in Africa.

- **Finance vs impact disparity:**

Africa alone suffered US\$ 8.5bn in weather-, climate-, and water-related damages in 2022 more than 11 times the amount pledged to the Loss & Damage Fund to date (World Meteorological Organisation, 2023).

While COP29 marks a move in the right direction, its pledges remain vastly inadequate compared with the scale of climate-related losses and the financing needs of developing economies.



“Emerging markets and developing countries, excluding China, need between US\$ 2.3 trn and US\$ 2.5trn a year by 2030 to meet climate goals. That is four times what is currently invested.” - UN (2024)

03



**BUSINESS OPPORTUNITIES TO CATALYSE
SUSTAINABLE AND INCLUSIVE GROWTH**

BUSINESS OPPORTUNITIES TO CATALYSE SUSTAINABLE AND INCLUSIVE GROWTH

This chapter identifies and describes business opportunities across Africa along five tracks: environmentally sustainable energy systems, opportunities in the 'blue economy', climate-smart agriculture, climate-resilient infrastructure, and mining for critical minerals and their domestic beneficiation. Moreover, this chapter prioritises the thematic areas across various African countries.

3.1 Dissecting the Themes

3.1.1 Environmentally sustainable energy systems

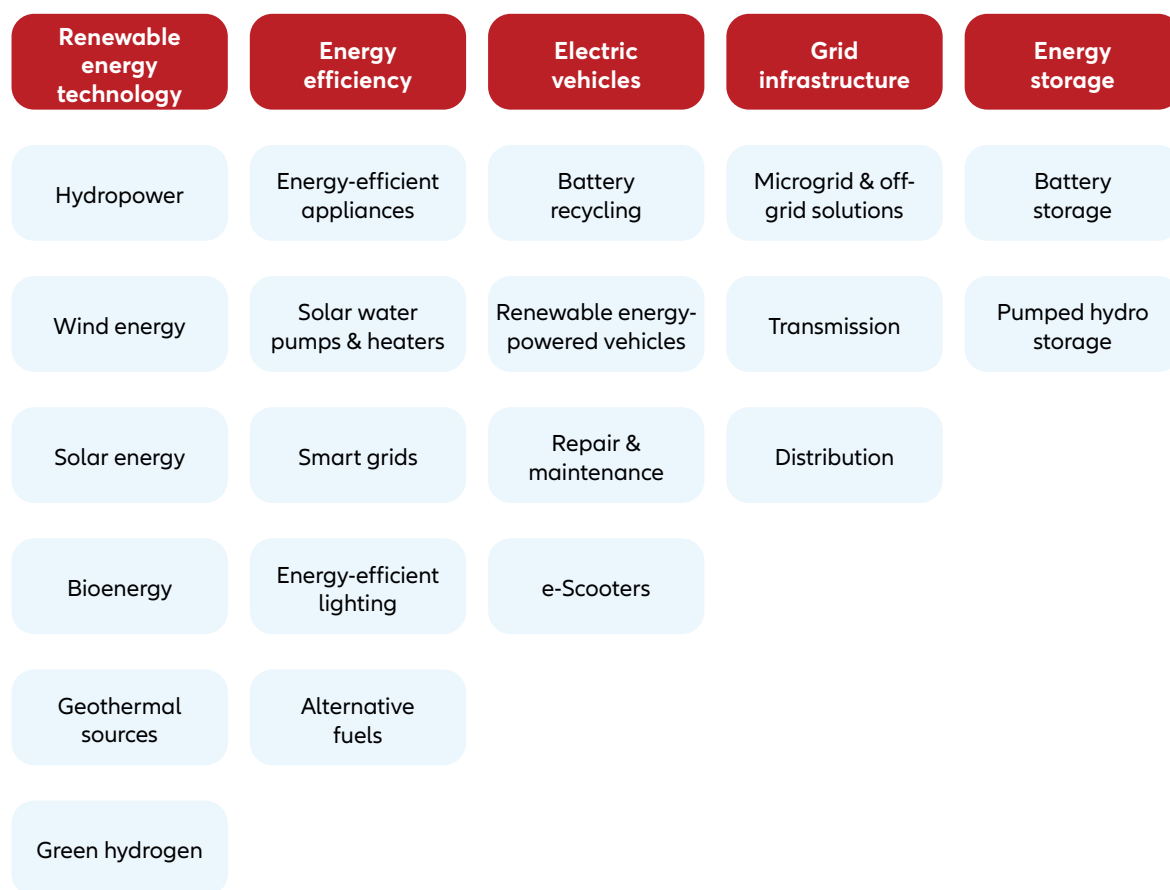
Africa's rapid population growth and urbanisation imply that there will be a substantial increase in energy demand from households and corporations. UNECA (2024) projects that over a quarter of the world's working-age population will reside in Africa by 2050. However, growth in energy consumption without enhancing energy efficiency and deploying sustainable energy measures will raise greenhouse gas (GHG) emissions. Environmentally sustainable energy systems are energy production and consumption models that minimise emissions, rely on renewable energy, promote energy efficiency, and ensure long-term energy security without depleting natural resources.

Fortunately, Africa has a unique advantage in that the continent has comparatively significant potential for renewable energy generation. For example, according to the World Economic Forum (2022), Africa's photovoltaic practical potential of 4.51 kWh/day is greater than the global average of 4.19 kWh/day.

The African Development Bank (AfDB) indicates that fossil fuels provide about 75% of Africa's electricity and that approximately 600mn people – 43% of the continent's total population – lack access to electricity. Hence, much scope remains to make Africa's energy systems environmentally sustainable. The continent must install 300 GW of renewable energy electrical generation capacity by 2030 to transition to a low-carbon future, improve electricity accessibility, and meet growing demand. Besides expanding renewable energy technologies, enhancing the efficiency of buildings would contribute to energy security and accessibility (CPI, 2024).

Figure 8 gives a high-level overview of business opportunities related to environmentally sustainable energy systems in Africa, followed by select case studies.

Figure 8: High-level business opportunities in environmentally sustainable energy systems



MOROCCO. The Noor Ouarzazate Solar Complex is a 580 MW power plant and is considered the largest concentrated solar power plant in the world. The plant can power up to 1mn Moroccan households with less costly and clean energy. The AfDB, World Bank, and European development banks co-funded this project for US\$ 2.5bn. Construction started in 2013, and the project was operational by 2018.

DRC, RWANDA & KENYA. Beyond Energy Investments (BBOX) started as a student charity in 2010 to fill the electricity supply gap in Africa. Headquartered in the UK and with over 600 staff, the company designs, manufactures, distributes, and finances innovative plug-and-play solar home systems to improve electricity access in the DRC, Rwanda, and Kenya, among others. In 2019, Africa Infrastructure Investment Managers acquired a minority stake in the company for US\$ 31m, which helped BBOX roll out solar home systems. Since 2010, the company has sold more than 150,000 BBOX products, connecting more than 700,000 people in the DRC, Rwanda, and Kenya to clean and affordable energy.

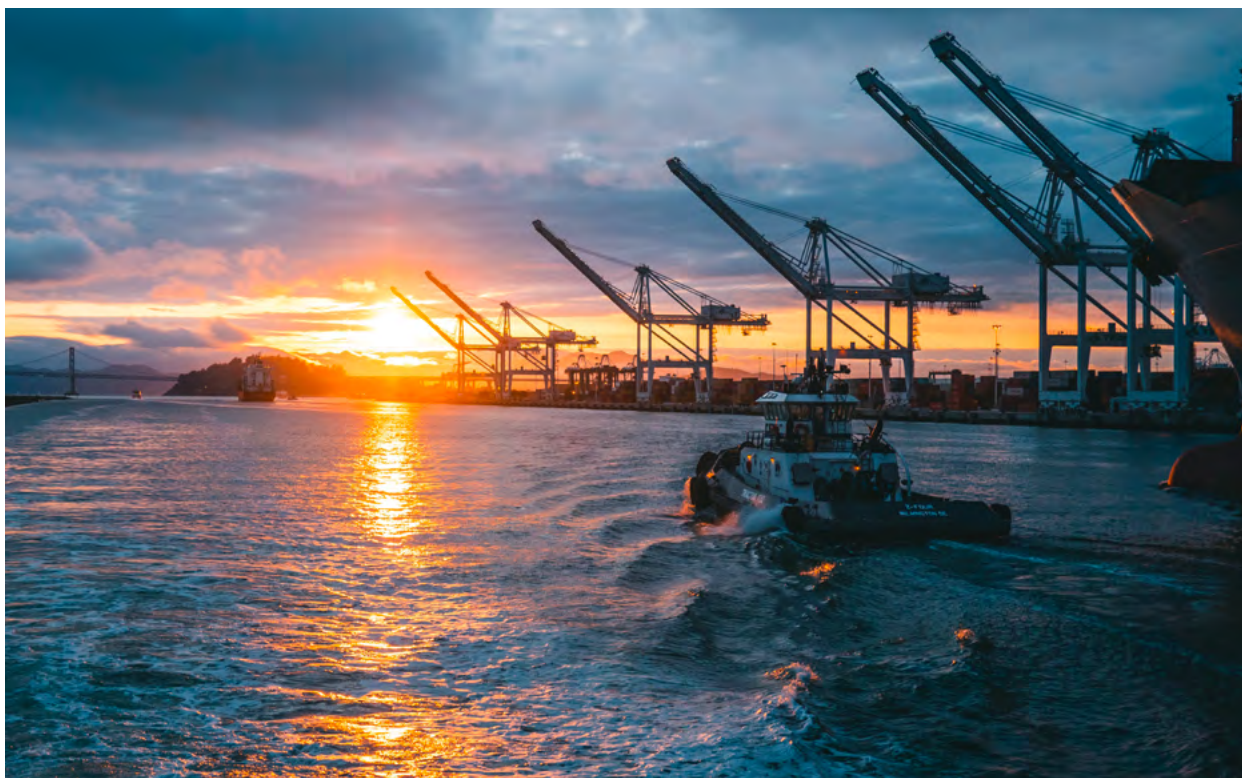
GHANA & NIGERIA. Founded in 2015, Starsight is West Africa's leading commercial and industrial solar power supplier. Through private equity funding, the company has installed about 27 MW of generation assets and 20 MW of storage at 362 sites across Ghana and Nigeria. Starsight sells to a diverse range of clients, such as banks, fuel stations, schools, hospitals, and commercial agribusiness firms.

SOUTH AFRICA. The Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) is one of the world's most progressive private-sector renewable energy programmes. Since its launch in 2011 until Q3 2024, US\$ 17.7bn has been invested among 92 Independent Power Producers (IPPs) with a combined capacity of 7,825 MW. Electrical energy generated by these projects powers more than 35.2mn households, provides over 82,000 jobs, and carries socio-economic contributions of US\$ 222.6m. Furthermore, the Battery Energy Storage IPP Programme has two projects that reached financial close in Q3 2024 with a combined capacity of 180 MW.

KENYA. The first African country to build geothermal plants and the globe's 8th largest geothermal energy producer with a capacity of 950 MW. The 74% state-owned Kenya Electricity Generating Company has built several plants in the Olkaria Area, a geothermally active region in the Great Rift Valley. Olkaria I (15 MW), II (70 MW), III (110 MW), IV (140 MW), and V (165 MW) were established between 1981 and 2019 through a mixture of private equity and loans provided by the AfDB, World Bank, and European banks. For example, the World Bank provided US\$ 40mn to establish the Olkaria I power plant in 1981. For Olkaria II, the World Bank and European investment banks provided roughly US\$ 317m.

"A large part of Africa has so far been left out of the energy transition. Only 2% of global investments in renewable energy in the past two decades were made in Africa, with significant regional disparities." - IRENA (2022)

3.1.2 Opportunities in the 'blue economy'



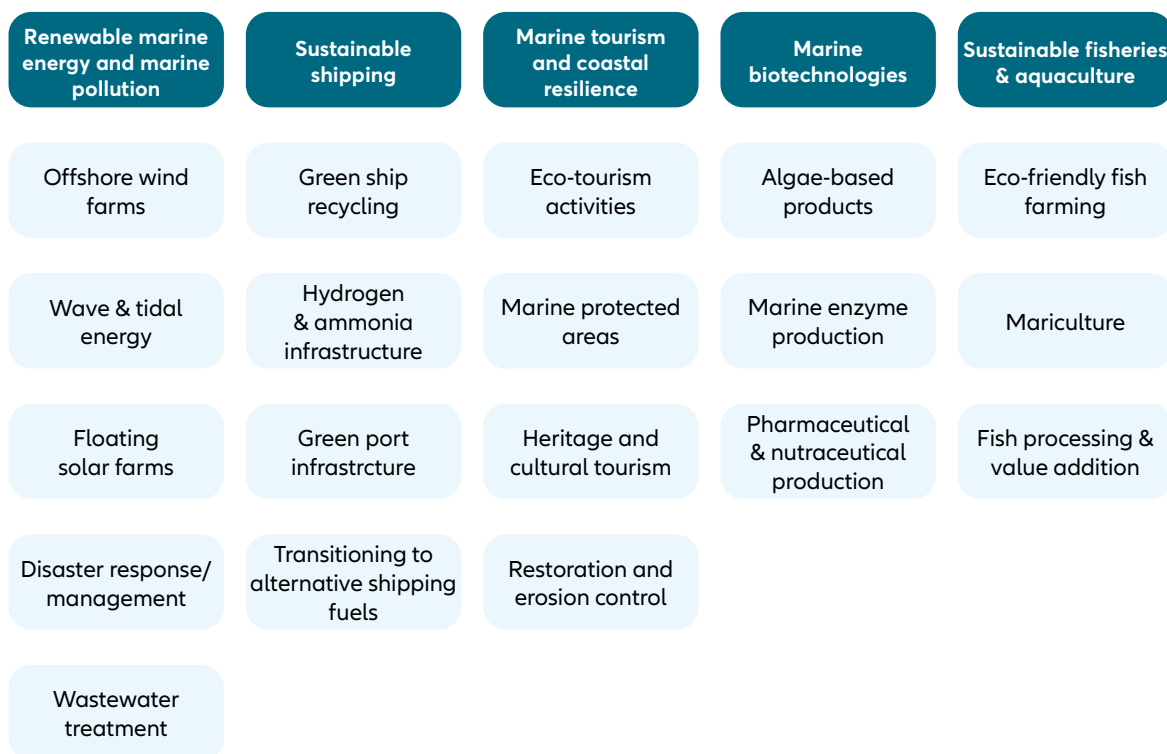
As a whole, Africa's maritime industry is estimated to be worth US\$ 1.0trn per year (Okafor-Yarwood et al., 2020). This figure could grow as it further develops sustainable marine tourism, shipping, and fishing sectors. The blue economy encompasses all activities deriving from marine and aquatic ecosystems, including oceans, coasts, rivers, lakes, and groundwater. It is not limited to Africa's 38 coastal countries and six islands, since blue economy initiatives include the interests of landlocked countries and inland water ecosystems. If managed well, Africa's blue economy can contribute meaningfully to the continent's economic growth through supporting trade and transport by sea, underwater mining, enhancing food security through sea and inland lake fish farming, renewable marine energies, tourism, and inland underground water resources for crop and livestock farming.

A well-harnessed blue economy can support income generation, job creation, and economic activity in diverse sectors. However, blue economy initiatives and development are lagging in most African countries, except Mauritius and Seychelles (March et al., 2024). Therefore, major potential for new blue economy-related investments in Africa remains to be exploited. Investments in climate-resilient water and sanitation systems yield an economic benefit of around US\$ 7.00 for every US\$ 1.00 invested, highlighting their potential to address multiple development goals and priorities (Economist Impact, 2023). While 'blue growth' makes substantial contributions to the economy through various sectors, the potential of Africa's blue economy has yet to be fully recognised and funded for development.

Figure 9 illustrates several business opportunities within the blue economy in Africa, followed by select case studies. These can be divided along five tracks, namely sustainable fisheries & aquaculture, sustainable shipping, marine biotechnologies, marine tourism & coastal resilience, and renewable marine energy & marine pollution. Renewable marine energy also relates to transitioning towards sustainable energy systems. Several African countries, like the island nations of Mauritius and Seychelles, have realised that their economic trajectory relies extensively on safeguarding their marine assets.



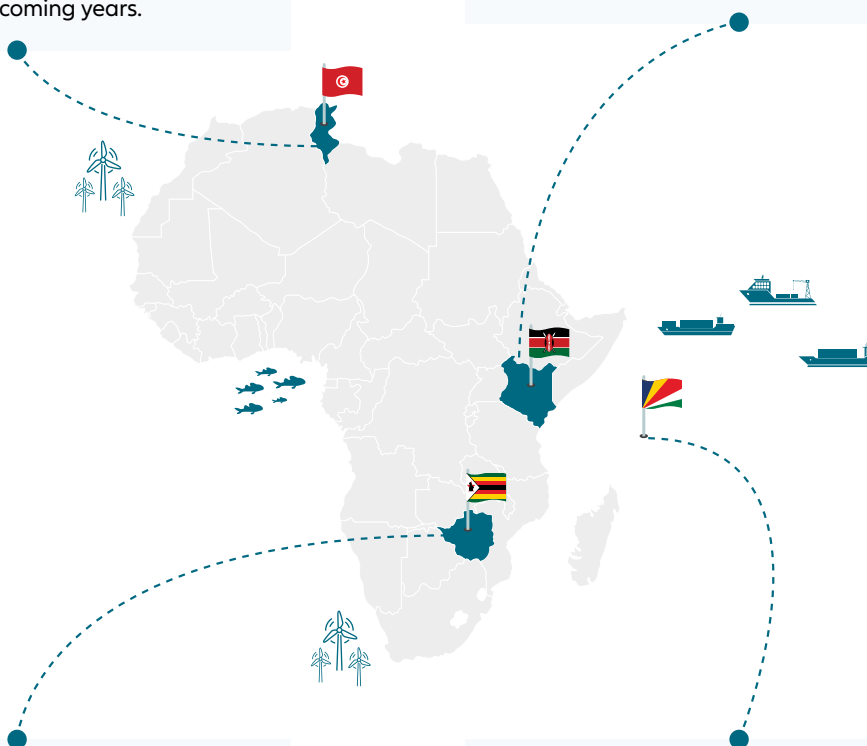
Figure 9: High-level business opportunities in the blue economy



In terms of renewable marine energy, many African nations have the potential to deploy wave and tidal electrical power solutions. However, these systems have not been implemented on a large scale. Southern Africa has been identified as having the best prospects for deploying wave power solutions – especially along the coast of South Africa, Mozambique, and Namibia (Sitoe et al., 2023). Apart from developing the continent’s coastal renewable energy resources, the African Union also developed the 2050 Africa’s Integrated Marine Strategy to create a sustainable, integrated, and secure African maritime sector. The strategy focuses on maritime safety & security, sustainable fisheries & aquaculture, ocean governance, and coastal & marine biodiversity preservation.

TUNISIA. Tunisia has 25 marine aquaculture farms, each producing between 400 and 3,500 tonnes annually, which accounted for roughly 16% of the country's total aquatic output in 2023. Production is mainly driven by seabass and seabream species. Aquafarmed production rose from 3,400 tonnes in 2007 to an estimated 26,000 tonnes in 2023, indicative of profitable business conditions in the sector. Tunisia's aquaculture sector approved projects valued at US\$ 8.4m in 2024, significantly more than the US\$ 1.8m recorded in 2023. This reflects growing interest in the country's marine resource potential, setting it up for further growth in the coming years.

KENYA. Seaweed farming in Kenya commenced in 2008 and has expanded to cover 20 villages. Data from the Kenya Marine and Fisheries Research Institute indicates that harvested seaweed rose from 5,204 kg in 2012 to 100,000 kg in 2022, which was worth more than US\$ 30,000. Kenyan farmers export dry seaweed to China, France, and the US, among others. Besides creating job opportunities and empowering Kenyan women financially, seaweed helps mitigate climate change by absorbing carbon emissions from the atmosphere, regenerating marine ecosystems, and creating biofuel and renewable plastics.



ZIMBABWE. Established in 1997, the Lake Harvest Aquaculture project in Zimbabwe has become Africa's largest tilapia producer with a production capacity of 12,000 tonnes per year. Sustainably farmed tilapia are processed into various value-added products such as fillets, fish fingers, and ready-to-eat meals. Manufacturing activities help boost Zimbabwe's exports of processed goods, in addition to employing over 700 people across the farming, processing, and distribution segments. The company received funding from various institutions, including the AfDB (US\$ 8m in 2013) and Aqua Spark (US\$ 7m in 2022), to allow operational expansions.

SEYCHELLES. The island nation launched the world's first blue bond in October 2018, raising US\$ 15m from international investors who receive a 6.5% coupon p.a. in US dollars for 10 years. The bond is an innovative financial instrument used to finance ocean- and marine-based projects that have positive environmental and climate benefits. To date, the bond's proceeds have funded marine conservation projects, expanded areas under protection, assisted local fisheries management, and distributed grants for research and development of blue economy projects within the country.

"The economic value of coastal and oceanic environments is valued conservatively at US\$ 2.5tm each year, and the overall value of the ocean as an asset is 10 times that." - World Wide Fund for Nature (2015)

3.1.3 Climate-smart agriculture

Agricultural activities in Africa account for 20% to 30% of the continent's real GDP (AfDB, 2019), while between 60% and 90% of Africans in both the formal and informal markets are employed in the sector (Mukasa, 2017). Yet, Africa faces severe climate change challenges such as rising temperatures and increased intervals of drought and flooding, threatening food security, economic stability, and rural livelihoods. Over 95% of Africa's agriculture depends on rainfall, making it highly vulnerable to climate variability (ISS, 2025). In addition, agri-food systems are responsible for one-third of global anthropogenic GHG emissions (Crippa et al., 2021). With a growing population and multidimensional poverty, Africa needs to increase its food production sustainably.

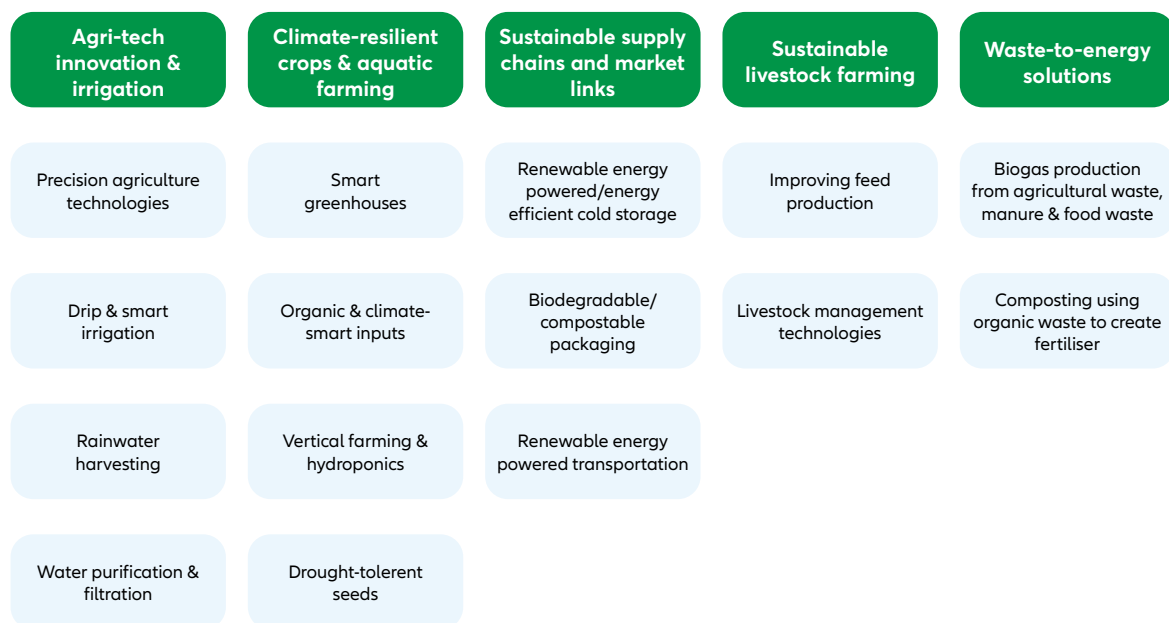
Africa has approximately 25% of the world's arable land but produces only 10% of global agricultural output (European Union, 2020). Hence, investments have considerable potential to boost Africa's agricultural output. Therefore, transforming Africa's agri-food systems, such as crops, livestock, fisheries, aquaculture, and forestry, is crucial. At the same time, lifting agricultural production should be done through a multi-sectoral approach that is gender transformative, pro-poor, and harnesses climate adaptation and mitigation measures. This is required to secure food supplies, reduce dependence on food imports, create jobs, and increase household incomes. Sustainable agriculture could, in turn, improve trade accounts, render African nations less susceptible to price pressures and climate variability, and help shore up consumer spending, which is a key driver of economic growth in Africa. Gender empowerment is needed, given that women typically manage home responsibilities, food security and child-rearing, yet have less access to natural resources, property rights, and socio-economic advantages than men.

Climate-smart agriculture is an innovative approach to ensure that Africa's food systems sustainably increase production, while being resilient to adverse climatic effects. It is based on three main pillars: (i) sustainably lift agricultural productivity and incomes, (ii) adapt and build the resilience of people and agri-food systems to climate change, and (iii) reduce or avoid GHG emissions. Key practices include using data-driven technologies to optimise resource use, using organic fertilisers to enhance soil fertility, crop rotation, rainwater harvesting and irrigation, using modified seed varieties that tolerate heat and drought, and integrating trees and crops to improve carbon sequestration and biodiversity. **Figure 10** outlines business opportunities within climate-smart agriculture in Africa, followed by select case studies.





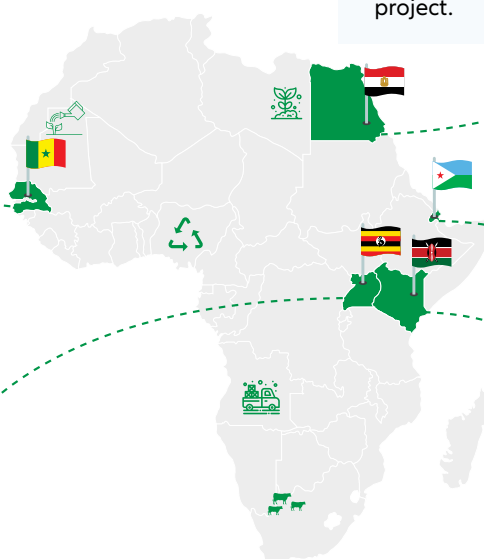
Figure 10: High-level business opportunities in climate-smart agriculture



Driving sustainable agriculture in Africa is especially important given the continent's susceptibility to climate change. According to Oritz-Bobea et al. (2021), climate change has lowered total agricultural productivity growth by 34% since 1961. Moreover, crop yields have also deteriorated, with maize and wheat yields on average dropping 5.8% and 2.3%, respectively, in sub-Saharan Africa (SSA) between 1974 and 2008 (Ray et al., 2019).

SENEGAL. The Qatar Fund for Development, together with the Global Green Growth Institute, financed the Solar-Powered Irrigation for Climate-Smart Agriculture in the Senegal River Valley for US\$ 2.9m. The project was executed between January 2021 and June 2024, installing 47 KW energy capacity which benefitted about 330 farmers. The project is expected to increase crop yields by 50%, raise farmer incomes by 10%, and provide over 20,000 jobs in the long term.

EGYPT. The Sustainable Agriculture Investments and Livelihoods (SAIL) project in Egypt aimed to reduce poverty and increase food security for poor people in newly reclaimed lands in Egypt. SAIL introduced several innovative technologies that improved the efficiency of irrigation systems and provided alternative sources of energy to reduce costs. The project also provided vocational training, rural microfinancing, and capacity building initiatives for rural women and youths. US\$ 94.6m was provided by the International Fund for Agricultural Development and the Global Environment Facility, while the project ran from 2015 to 2023. The Egyptian Ministry of Agriculture and Land Reclamation implemented the project.



UGANDA. The International Maize and Wheat Improvement Center and its partners provided over 60 seed varieties of drought-tolerant maize across 13 African countries between 2006 and 2013 under the Drought Tolerant Maize for Africa (DTMA) project. The Bill & Melinda Gates Foundation, among others, funded the DTMA project. While the project benefitted over 5mn smallholder farmers, empirical studies reveal that maize crop yields in Uganda increased by 15%, with the probability of crop failure declining by 30% post the DTMA project. The adoption of these varieties increased investments in maize production through expanding the area cultivated and mechanisation.

KENYA & DJIBOUTI. Between 2016 and 2019, the Djibouti Agro-Pastoralists Association, in partnership with the Eastern Africa Farmers Federation and the UN's Food and Agriculture Organization, spent US\$ 500,000 on a cross-breeding programme between Kenyan Alpine goats and Djiboutian goats to improve the latter's milk production. By the end of 2019, 5,896 cross-bred goats benefitted 165 dairy goat breeders. In addition, around 20 dairies were established, each producing 20–24 litres of milk daily.

"Under the worst-case climate change scenario, a reduction in mean yield of 13% is projected in West and Central Africa, 11% in North Africa, and 8% in East and Southern Africa."

- World Meteorological Organization (2019)

3.1.4 Climate-resilient infrastructure

Around 70% of the infrastructure needed 50 years from now has not yet been built (Dorsouma, 2024). Africa's structural deficit, growing population, and rising urbanisation underpin the need for infrastructure investment. By 2100, 13 of the world's 20 largest megacities are expected to be in Africa, compounding the need for infrastructure and sustainable cities (Hoornweg & Pope, 2017). Low development levels and limited climate resilience have left infrastructure vulnerable to disasters, making it imperative to prepare for potential climatic impacts and risks that could affect existing and needed infrastructure. At the same time, the construction and building standards of housing, roads, motorways, bridges, ports, and airports need consistent and systematic integration of climate resilience to provide long-lasting infrastructure for a growing urban population. This will also aid growth in the continent's transport, energy, healthcare, manufacturing, and tourism sectors.

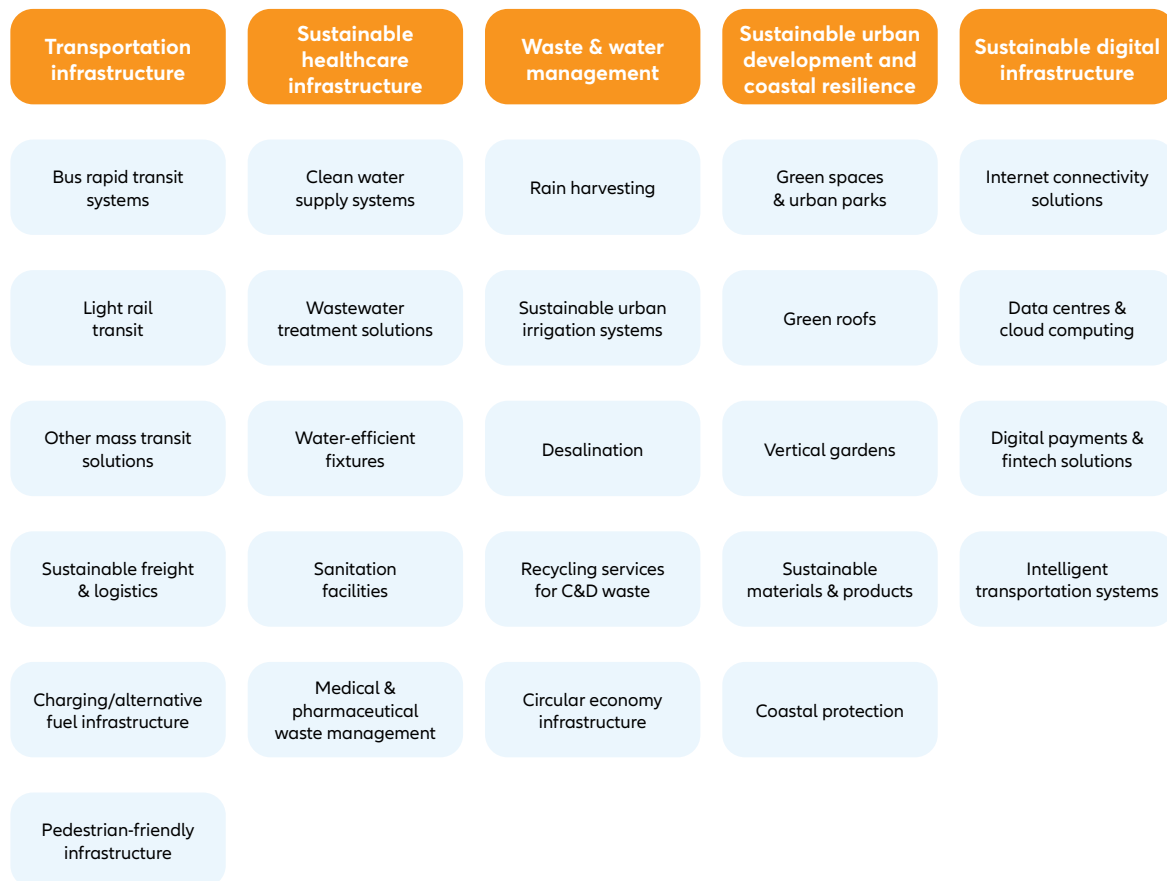
Climate-resilient infrastructure ensures that physical structures are designed and built to withstand disasters, remaining functional, safe, and cost-effective despite increasing climate risks. Sustainable infrastructure interventions are actions to develop infrastructure systems that are environmentally, socially, and economically sustainable throughout their life cycle (UNEP, 2022). Examples of such interventions include stormwater drainage systems, urban gardens to absorb excess rainwater, nature-based solutions, climate-resilient and low-carbon transportation structures and systems, heat-resilient building materials, renewable energy, circular economy practices, digitisation of structural networks, and establishing early warning and monitoring systems to detect climate risks in advance.

Figure 11 displays business opportunities within climate-resilient infrastructure in Africa, followed by select case studies. These initiatives are vital to shore up the continent's climate change readiness and create a supportive ecosystem to safeguard vulnerable economies, while also creating an enabling environment for the deployment of other sustainability-linked initiatives. For example, green spaces, urban parks, and coastal protection infrastructure might not be immense revenue-generating initiatives; however, they remain key to reducing communities' carbon footprints while pursuing a holistic approach in the transition to sustainable practices. Coastal protection infrastructure, in turn, is necessary to minimise economic losses stemming from adverse weather conditions.





Figure 11: High-level business opportunities in climate-resilient infrastructure



Accommodative infrastructure is a key catalyst for the roll-out of other climate-related projects. Digital infrastructure also plays a vital role in supporting broader, interconnected economic development, while healthcare systems limit people's exposure to diseases and improve socio-economic conditions. Moreover, these initiatives are related to improving macroeconomic conditions, thereby encouraging environmentally sustainable transitions within country-specific developmental contexts.

MOROCCO. Spanish energy and water firm Coxabengoa commenced operations at one of Africa's largest desalination plants in Agadir in Morocco. Through a public-private partnership with the Moroccan state, US\$ 460m was used to construct the plant, which produces 275,000 cubic metres of water a day, with 150,000 cubic metres allocated to drinking water and the rest going to irrigation, benefiting tourism and agriculture in turn. This is enough drinking water for approximately 1mn people. The facility also promotes conservation of the aquifers in the area. Plans are underway to install solar and wind power that will provide the desalination plant with electricity.

RWANDA. The Green Gicumbi project in Rwanda constructed 100 climate-resilient housing units, which are already occupied by vulnerable families relocated from high-risk areas. Low-carbon techniques and materials were used in the construction process. The project also constructed 10,000 check dams in gullies, 289 household rainwater harvesting tanks, 16,913 infiltration ditches, 139 underground tanks, and 20 water ponds to manage flood risks around settlements. This project contributes towards Rwanda's Vision 2050 of affordable and climate-resilient housing to increase the proportion of rural households settled in integrated planned settlements.



ANGOLA & NAMIBIA. Paratus built the largest data centres in Angola and Namibia in 2019 and 2023, respectively. The centres make use of batteries and solar power to power over 8,500 servers. In 2023, the company received a three-year US\$ 31m debt facility from Private Infrastructure Development Group and fund manager Ninety One to expand the Angolan data centres and construct new fibre routes connecting Namibia, South Africa, Mozambique, Angola, Zambia, and Tanzania.

AFRICA-WIDE. Since 1988, Hydraform has provided an eco-friendly alternative to traditional building materials. The company's soil-cement blocks supported sustainable building practices and reduced construction costs for over 100,000 houses, commercial buildings, schools, hospitals, and community buildings. Hydraform's technology is used across Africa, enabling property developers to participate in construction activity at lowered costs. The on-site blockmaking machines create interlocking bricks that allow contractors to build up to six times faster than with conventional bricks, thereby enhancing productivity as well.

3.1.5 Mining for critical minerals and domestic beneficiation

The manufacturing of battery or fuel cell electric vehicles, renewable energy technologies, and semiconductors related to the globe's green transition is forecast to increase the demand for critical metals by nearly 500% by 2050 from current production levels. This cannot be achieved without Africa's resources. Africa holds roughly 30% of the proven critical mineral reserves which various green technologies need. Also, Africa possesses approximately 40% of the world's aluminium, chromium, cobalt, manganese, and platinum group metal reserves, which are all crucial for batteries, renewable energy, and hydrogen technologies (Mo Ibrahim Foundation, 2022). Regarding metals for battery energy storage systems, Africa holds about 6% of global lithium reserves (African Minerals Development Centre, 2024) and nearly 18% of global vanadium reserves (Boni et al., 2023).

Apart from its vast critical mineral wealth, the continent is also moving to expand its transportation infrastructure to enhance the distribution of minerals. Southern Africa, in particular, is on track to significantly improve the extraction of critical minerals while fostering market access. The Lobito Corridor, for example, will be pivotal for the development of critical minerals. Once one of the busiest railroads in Africa, the 1,700 km Lobito railway runs from the Port of Lobito on the Atlantic coast of Angola to the mining town of Tenke in the DRC. Although Chinese railway companies rehabilitated the network between 2006 and 2019, the line is currently operating notably below its design capacity. Apart from the infrastructure-related economic gains that may be realised, countries such as Zambia and the DRC are also moving to expand their mining and intermediate value-adding capabilities.

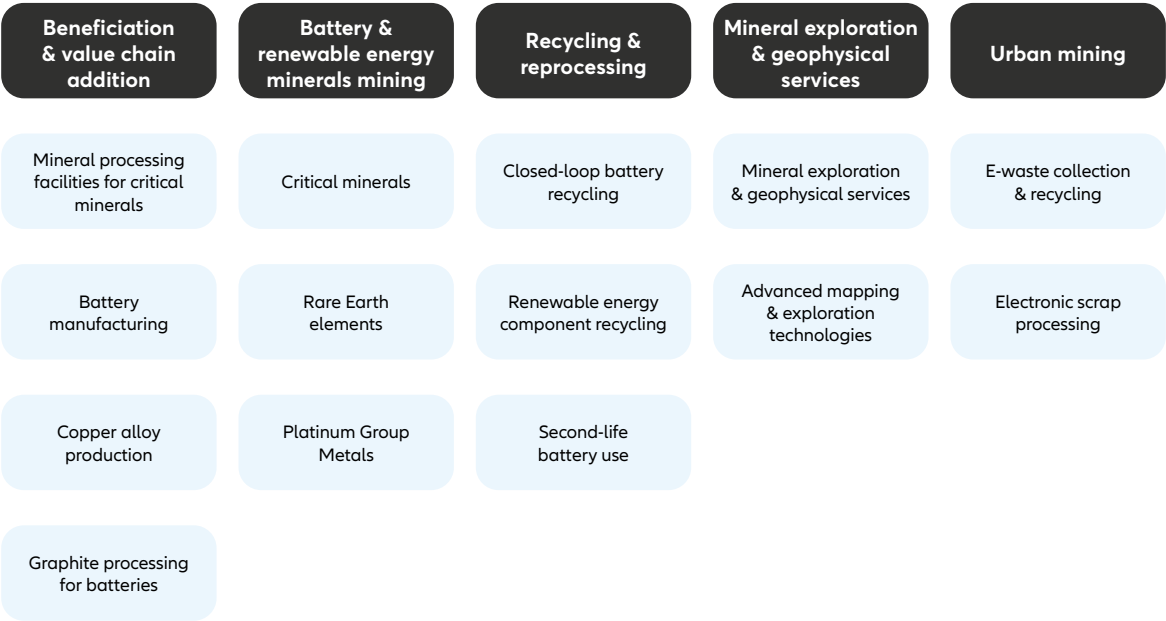
Elsewhere in Southern Africa, the establishment of the Trans-Kalahari Railway has gathered momentum. Although progress has been somewhat muted since Botswana and Namibia entered into a memorandum of understanding (MoU) in 2010 to develop the railway and inking a bilateral agreement in 2014, mounting logistical difficulties in neighbouring South Africa have reignited appetite for the project. In late 2023, the two nations called for expressions of interest in the project, which was slated to run from September 6 to November 8. This was to be followed by a request for proposals stage commencing in March 2024. Although the original intent of the railway was to transport coal from Botswana's coalfields to the Atlantic Ocean, the slump in coal prices and shift away from fossil fuels have prompted a course alteration. It is understood that the focus will now be on the fast-developing Kalahari Copperbelt in the west of Botswana.

Establishing domestic refineries and value addition chains close to critical mineral sources also presents opportunities to increase the value of mineral exports, boost foreign reserves, support the continent's 'green' industrialisation drives, and create jobs. **Figure 12** shows business opportunities in Africa's critical minerals mining and beneficiation track, followed by select case studies.



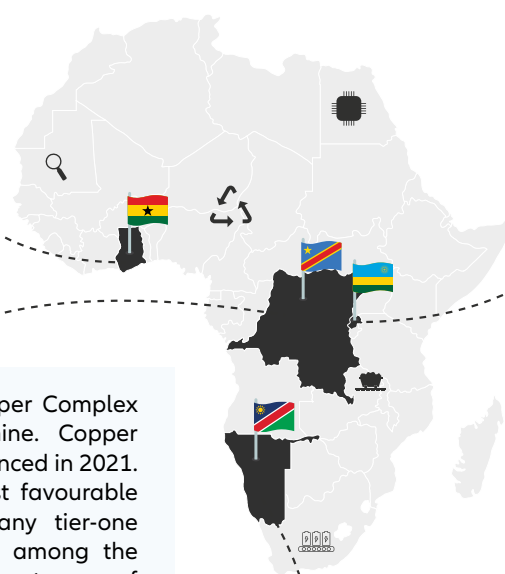


Figure 12: High-level business opportunities in critical mineral mining and beneficiation



GHANA. The German development bank provided over US\$ 20m to construct Ghana's e-waste handover centre between 2021 and 2024. The centre will provide a mechanism for collecting, dismantling, recycling, and disposing of electronic waste. Supporting sustainable management of electronic waste will, in turn, reduce the effects of environmental pollution and health risks.

RWANDA. In 2023, the Rwanda Mines, Petroleum and Gas Board initiated a three-year mineral exploration campaign, to run until 2026. The campaign will cover the entire country and attempts to understand its lithium and other critical mineral deposits better. While the RMB's one-stop centre streamlines the exploration license application process, it also enforces compliance with health, safety, and environmental standards.



DRC. The Kamoa-Kakula Copper Complex is Africa's largest copper mine. Copper concentrate production commenced in 2021. The mine has one of the most favourable environmental footprints of any tier-one copper mine globally, having among the lowest carbon emissions per tonne of copper in the world. In addition, about 55% of the operation's retreated mining waste (i.e., tailings) are pumped back into the underground mine as backfill to minimise environmental degradation and enhance the stability of the mine.

NAMIBIA. Andrada Mining stands to be the largest lithium miner in Namibia. The company's mining license covers nearly 19,700 hectares that host numerous pegmatites, with mineralisation including lithium, tin, tantalum, and rubidium. A pilot plant was commissioned in October 2023 and successfully produced 10 tonnes of lithium concentrate, with production expected to increase to 250 tonnes in the near term. In 2024, Andrada spent about US\$ 22m on 224 local suppliers and employed 471 individuals, of which 99% are Namibian. Furthermore, the company partnered with SQM to explore and conduct feasibility studies at the Lithium Ridge project, about 35 km from the Uis mine and encompasses a 3,330-hectare mining license. Exploration studies revealed extensive pegmatites hosting lithium and tantalum deposits along a 6 km strike. The US\$ 2m agreement to participate also gives SQM an option to invest US\$ 20m over the next three and a half years to acquire a 40% stake in the project.

"Global revenues from the extraction of just four key minerals – copper, nickel, cobalt, and lithium – are estimated to total US\$ 16tn over the next 25 years, in 2023-dollar terms. Sub-Saharan Africa stands to reap over 10% of these cumulated revenues, which could correspond to an increase in the region's GDP by 12% or more by 2050." - IMF (2024)

3.2 Prioritisation of Business Opportunities

The magnitude of investments required to ensure satisfactory and inclusive socio-economic development in light of climate and sustainability pressures can be overwhelming. Accordingly, to get a sense of investment priority – identifying the areas in which governments should focus efforts to facilitate both private and public investment – it helps to consider two different measures: the investment imperative and the investment potential.

The investment imperative refers to the urgency with which specific aspects of climate change vulnerability need to be addressed based on a country's sensitivity in that area. Concerning the investment themes, the analysis is particularly relevant in the African context for sustainable energy systems, climate-smart agriculture, and climate-resilient infrastructure. Measuring climate vulnerability from various perspectives within each theme makes it possible to identify which subsectors are the most pertinent concerns. These subsectors should receive government priority in the form of investment incentives, public investment, or a combination of measures to lower perceived risk. The climate vulnerability scorecard in **Table A** shows how 21 African countries with comparable data across the investment themes perform on several measures within a global context.

Table A: Investment imperative scorecard (green = favourable; red = unfavourable)

Country	Sustainable energy systems				Climate-smart agriculture			Climate-resilient infrastructure		
	Access	Reliability	Sustainability	Transition readiness	Agricultural employment	Food vulnerability	Water security	Infrastructure vulnerability	Hazard sensitivity	Infrastructure deficit
Algeria										
Angola										
Botswana										
Cameroon										
DRC										
Côte d'Ivoire										
Egypt										
Ethiopia										
Gabon										
Ghana										
Kenya										
Mauritius										
Morocco										
Mozambique										
Namibia										
Nigeria										
Senegal										
South Africa										
Tanzania										
Tunisia										
Zambia										

Sources: Oxford Economics Africa (2025); ND-GAIN (2024); WEF (2024); UN (2023)

Investment potential revolves around the natural resources available in each country. The analysis applies to the themes of sustainable energy, climate-smart agriculture, critical minerals, and blue economy. In addition, the investment potential related to climate-resilient infrastructure is a function of the investment needs of each country. Businesses will not only be presented with opportunities to provide the necessary infrastructure, but related activities such as project funding, development, and supplying intermediate goods also present attractive opportunities.

Africa stands on the cusp of a transformative era, presenting immense investment potential across several interconnected sustainable sectors. The continent's abundant renewable energy resources spanning solar, wind, hydro, and geothermal coupled with a growing demand for electrification, create a compelling case for large-scale investments in power generation and grid infrastructure, as well as the burgeoning technology manufacturing and critical mineral supply chains. By strategically developing these mineral resources, including crucial elements like cobalt, manganese, lithium, and platinum group metals, along with robust beneficiation initiatives, Africa can become a pivotal player in the global clean energy transition, fostering industrial growth and maximising economic returns.

With most of the world's arable land, Africa holds the key to addressing global food security through strategic investments in climate-smart agriculture. Enhancing agricultural productivity and resilience via agri-tech innovation, efficient irrigation, climate-resilient crops, and sustainable water management promises to reduce the continent's reliance on imports and create more stable economies, while offering considerable opportunities for investors seeking both financial and social impact. Complementing these sectors is the urgent need for climate-resilient infrastructure across transport, energy, and digital networks. Addressing the continent's structural deficit with solutions capable of withstanding climatic shocks and supporting socio-economic stability represents a substantial investment opportunity, safeguarding development gains and fostering long-term economic resilience.

Finally, Africa's extensive coastal and inland water resources are vital for livelihoods and economies and require significant investment in blue economy initiatives to combat degradation from overfishing, development, and pollution. Prioritising the health and sustainable use of these aquatic ecosystems through investments in sustainable fisheries, eco-tourism, coastal protection, and pollution reduction can unlock considerable ecological, social, and economic benefits, creating resilient coastal communities and fostering long-term blue growth across the continent. In essence, a combination of natural resources, rising demand for goods and services, and pressing sustainability challenges make Africa a prime destination for impactful and profitable investments across interconnected, forward-looking sectors.

04

**MOBILISING CAPITAL FOR
AFRICA'S SUSTAINABLE DEVELOPMENT**

MOBILISING CAPITAL FOR AFRICA'S SUSTAINABLE DEVELOPMENT

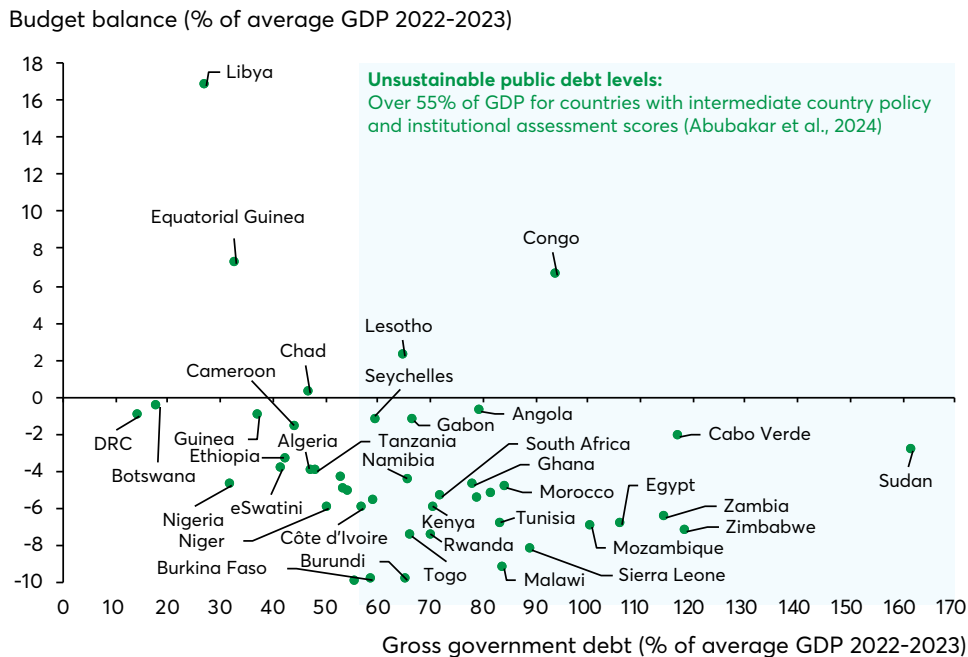
Africa's urgent need for sustainable capital is underscored by the continent's heightened vulnerability to the adverse effects of climate change and the significant financial resources required to bridge the investment gap for environmentally sustainable and inclusive economic growth. Sustainable finance refers to the dynamic convergence of capital and sustainability, aiming to reshape financial systems towards a more equitable and environmentally responsible future (Taneja, et al., 2023).

By aligning capital flows with ESG objectives, sustainable finance promotes long-term economic, environmental, and socio-economic wellbeing, as well as structural resilience to climatic hazards and disaster risks (Yimer, 2024). In Africa's dynamic, multifaceted socio-economic and developmental context, the successful mobilisation of sustainable finance necessitates prioritising social progress and resilience building alongside environmental concerns, given the widespread multidimensional poverty, inequality, and deep electrical and energy access deficits throughout the continent.

4.1 Fiscal Fractures Beget Private Finance

Africa requires between US\$ 130bn and US\$170bn each year for resilient infrastructure, while actual investments are around US\$ 80bn p.a., resulting in an annual funding gap of US\$ 50bn to US\$ 90bn (AfDB, 2022). African governments are the largest investors in infrastructure, contributing over 40% to total funding. External investors and partners provide approximately 35%, although their share is declining, while private sector participants largely cover the remaining infrastructure spending share of 25% (AEF & AUDA-NEPAD, 2025). However, the challenging fiscal positions of most African governments, coupled with limited access to international capital markets, constrain their ability to fund climate change mitigation and adaptation efforts (AfDB, 2023). As shown by **Figure 13**, many countries face immense public debt burdens and deep budget deficits with insufficient fiscal leeway to finance large-scale capital projects.

Figure 13: Fiscal positions of African countries



Sources: World Bank (2025); Oxford Economics Africa (2025)

It is also difficult for African countries to raise finance at affordable rates without further compromising their debt burdens. Despite having some of the lowest default rates on infrastructure projects, African countries borrow at interest rates up to eight times higher than wealthier nations and face a 500% premium on capital market loans compared with World Bank rates, driving debt service costs to US\$ 74bn in 2024, up from US\$ 17bn in 2010 (AEF & AUDA-NEPAD, 2025).

The lack of benchmark investment ratings and restrictive institutional asset allocation mandates often makes it difficult for public and commercial entities in Africa to raise private climate finance through traditional debt capital markets, owing to their weaker investment grades. As a result, private funders frequently prefer a project finance approach, seeking direct access to physical assets and cash flows generated through off-take agreements for security and repayment (Rumble & First, 2021).

Moreover, the recent imposition and ongoing threat of high US import tariffs on African countries further restrains their access to global debt markets, as foreign investors sell off perceived riskier assets across the continent, resulting in higher sovereign bond yields. This, in turn, additionally confines the ability of many African countries (e.g., Angola, Benin, Côte d'Ivoire, Gabon, Kenya, Nigeria, and Zambia) to raise money internationally and service their existing debt, especially as currency depreciation, lower commodity prices, and reduced prospective exports from the continent limit tax revenues.

Notwithstanding unsustainable government debt levels, the average annual climate investment needs of several African countries are close to or even exceed their gross fixed investments as a share of GDP. For example, Ethiopia's average mitigation and adaptation funding needed in 2022 (US\$ 31bn) was equivalent to 24.5% of its GDP on average between that year and 2023, which was 0.7 percentage points above the country's actual gross fixed capital formation (23.8% of GDP) over the same period (estimated from Strinati et al., 2024).

Besides Africa's enormous climate funding gap, public sector institutions have extended five times more in climate finance to African countries than private institutions, of which international (i.e., bilateral and multilateral) sources have accounted for the largest share of public climate financing to the continent by far (refer to [Chapter 2.2](#)). Consequently, the private sector plays a crucial and growing role in infrastructure investment.

However, commercial investments in climate adaptation infrastructure and technologies are generally more difficult to secure than those in mitigation measures. Demonstrating a clear return on investment in adaptation projects is more challenging, as they are often public goods and typically do not generate sufficient short-term cash flows to attract private capital. Moreover, awareness of climate investment options and capacity to access sustainable finance, particularly for adaptation, remain low across the private sector due to limited training, insufficient knowledge of financing mechanisms, and inadequate qualifications among small and medium enterprises (SMEs) to develop and attract bankable projects (Rumble & First, 2021).

Even so, efforts are underway to develop innovative financing mechanisms through blended finance and investment models to attract private capital into adaptation. In addition, businesses increasingly recognise the need to invest in actions to protect their assets, operations, and supply chains against the current and future impacts of climate change. Capital investments in climate adaptation solutions by half of the world's largest companies have the potential to increase their revenues by US\$ 236bn (GCA, 2025).

Greater private sector participation in climate mitigation projects also helps to alleviate fiscal pressures so that increased public funding can be directed to structural investments in adaptation infrastructure, especially in vulnerable communities that are exposed to the worst impacts of climate change and disasters. Additionally, public funds, albeit limited, have a critical role in de-risking, mobilising, and catalysing private capital, as well as in attracting low-cost funding from development partners. Even so, a mere 20% of Africa's infrastructure projects in various planning stages successfully progress to financial close (AEF & AUDA-NEPAD, 2025).

To mobilise the requisite capital, it is imperative for countries to have clear investment frameworks, policy certainty, and credible mitigation and adaptation plans alongside detailed project preparation capabilities for financially feasible projects, while offering sufficient incentives for private investment (Yimer, 2024; GCA, 2025). Similarly, domestic resource mobilisation (e.g., through increasing internal revenue and curbing illicit financial flows), remittances, enhancing the quality of foreign aid spending, and attracting foreign direct investment (FDI) into bankable projects are vital sources to help fund Africa's sustainability needs (AEF & AUDA-NEPAD, 2025).

In that regard, private sector participants need long-term certainty, through policy and political support, that their investments in climate-resilient infrastructure will be safeguarded and that the expected returns will be realised over the lifetimes of projects. Climate investment plans must also be pragmatic to ensure that structural shifts to environmentally sustainable economies do not compromise access to resources, affordability, and much-needed socio-economic development in Africa. Consequently, African countries need significant financial resources under grants and highly concessional terms if they are to progress to low-carbon economies, improve resilience against adverse weather conditions, reinforce inclusive socio-economic development, and supply the world

with key transition minerals (GCA, 2025). Concessional or blended finance comprises the combination of debt, equity, and/or grant capital, which are offered at comparatively advantageous terms to the market, such as through lower interest rates, longer repayment periods, and/or the provision of guarantees (AEF & AUDA-NEPAD, 2025; CPI, 2024). Innovative climate finance mechanisms present a valuable opportunity for African nations to boost their development efforts.

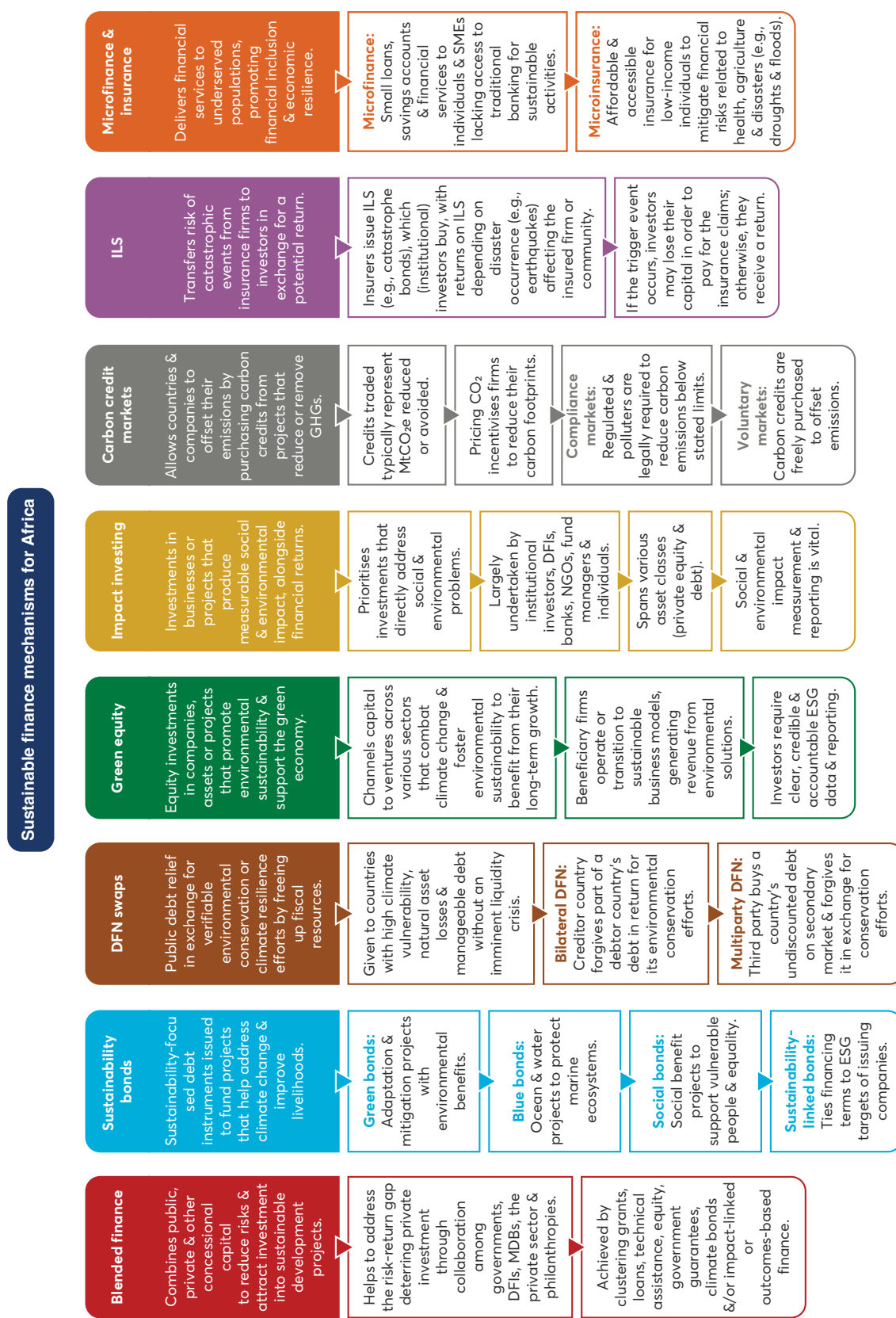
4.2 Innovative Financing Mechanisms to Propel Africa's Green Revolution



The stark fiscal, socio-economic, and structural constraints facing African countries, coupled with the ongoing risk of diminishing levels of official development assistance under prevailing geopolitical circumstances, mean that alternative sources of financing will be needed to help fill the growing climate finance gap. Various innovative financing instruments exist to mobilise capital and facilitate environmentally sustainable economic development across the continent, which, depending on the interplay between sectoral needs and business opportunities therein, can be tailored to country-specific circumstances. Commonly characterised as 'green' finance, these mechanisms have progressively gained traction over the past decade to support sustainable and socio-economically inclusive development in Africa.

Figure 14 offers a sustainable finance taxonomy by categorising financing mechanisms that contribute to environmentally sustainable objectives, while also providing an overview of each instrument. The most prominent suite of financing instruments to drive Africa's 'green revolution' includes blended finance mechanisms, sustainability bonds, debt-for-nature (DFN) swaps, green equity, impact investing, carbon credit trading, and insurance-linked securities (ILS), as well as microfinance and microinsurance products. These mechanisms have supported a wide range of projects that are fostering inclusive socio-economic development, reducing carbon emissions, and catalysing mitigation and adaptation efforts.

Figure 14: Overview of innovative financing instruments to mobilise capital and catalyse environmentally sustainable development in Africa

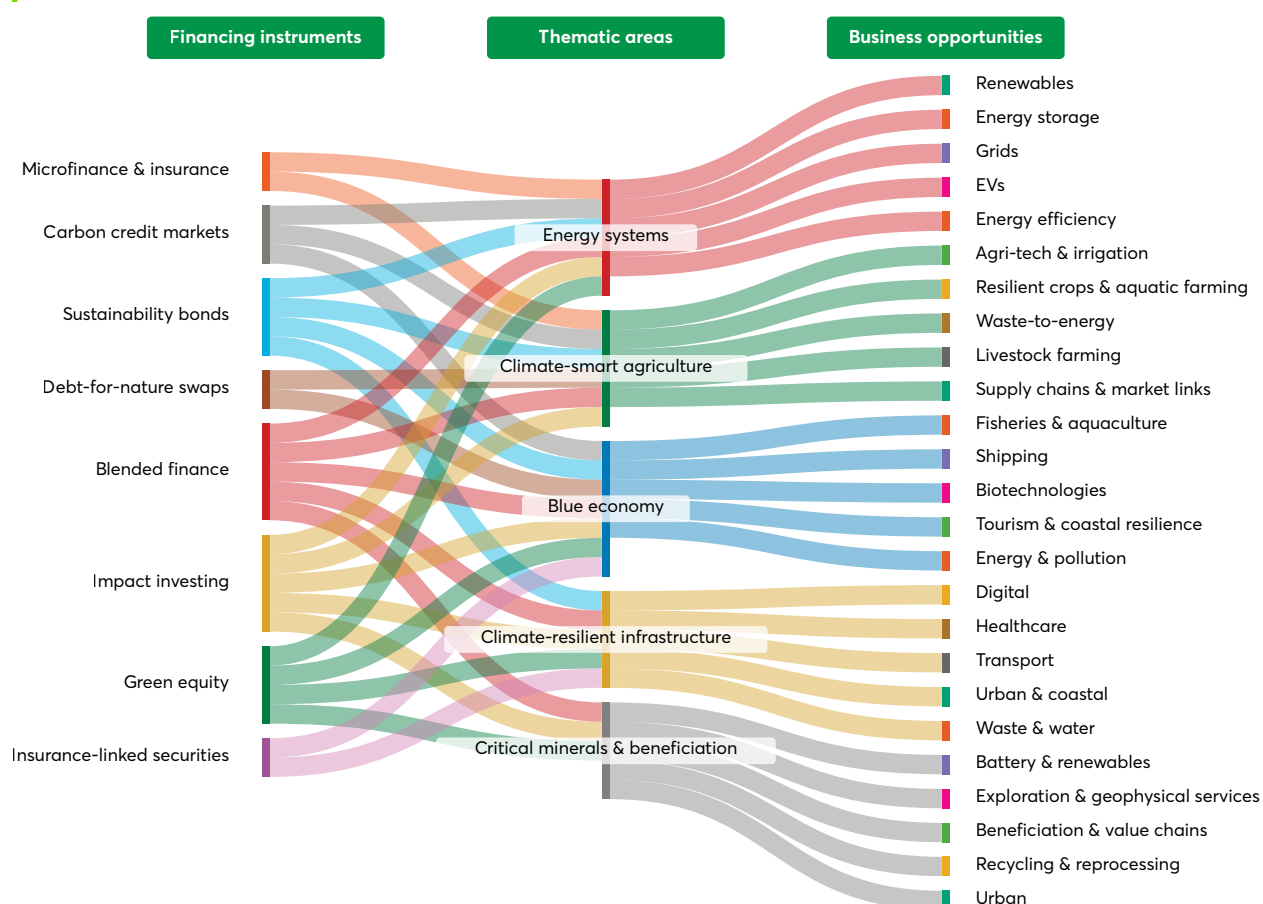


Sources: Geary et al., (2021); Agbloyor et al., (2021); GCA (2023); CPI (2024a); Hand et al., (2024); AEF & AUDA-NEPAD (2025); Simeth (2025); Oxford Economics Africa (2025)

Figure 15 matches the sustainable financing instruments outlined in **Figure 14** with the thematic tracks and their business opportunities described in **Chapter 3** to reinforce environmentally friendly, inclusive, low-carbon, and resilient economic growth and structural development. The linkages illustrate the business opportunities most commonly financed by the respective instruments, many of which are generally concurrently funded by more than one mechanism. Still, the flows shown for some financial instruments are open-ended and subject to the practical undertakings that are viable within each thematic area and corresponding business opportunity.

For example, although green equity in climate-smart agriculture projects is less common in Africa (e.g., due to being smaller in scale, having higher risks amid climate variability, and/or lower returns), these investments may still be appropriate in instances where investment returns can be justified (e.g., in larger-scale food production firms, carbon sequestration and credit trading projects, and/or agri-tech start-ups). Similarly, while green bonds are seldomly associated with critical minerals and the beneficiation thereof, it may be practical to issue such bonds if certain projects are spearheaded by creditworthy organisations, are financially stable, occur within favourable monetary conditions, and do not entail ecological harm (e.g., for major electronic scrap processing plants or closed-loop battery recycling operations). Sustainable finance and business innovations are constantly evolving, with bespoke approaches designed, structured, applied, and implemented for commercial opportunities. Over time, more financial mechanisms will become available to serve an increasing variety of environmentally sustainable business opportunities.

Figure 15: Linkages between sustainable finance and business opportunities



Regardless, as depicted in **Figure 14** and **Figure 15**, **blended finance** can be used for most environmentally sustainable business opportunities. By combining concessional public and/or donor resources with other forms of private finance, blended funds can increase sustainability investments given its role in the provision of seed funding, lowering perceived investment risks (e.g. through guarantees, first-loss tranches, and technical assistance), reducing debt servicing costs, and scaling innovative projects that would otherwise deter traditional investors. Africa accounted for over 41% of global blended finance deals for climate action between 2016 and 2021, while registering the most deals in such funding for climate change (AfDB, 2023).

Likewise, **impact investing** applies to any sector or business aiming to achieve both financial profit and positive social or environmental change, with these investors requiring clear and measurable ESG reporting in return for their ownership. In that regard, borrowers can attract impact investors by showing they are capable of providing impact reports and how their projects support specific sustainable development goals (SDGs), especially when these targets are embedded in the mandates and operational policies of public institutions (Rumble & First, 2021).

On the other hand, the supply of **sustainability bonds** green, blue, social, and sustainability-linked are characteristically more suitable for issuers (e.g., governments, companies or banks) with large and expensive projects that promote low-carbon energy transitions, blue economy initiatives, climate-resilient infrastructure, and, in certain cases, climate-smart agricultural practices. Despite green bonds specifically being the largest form of environmentally sustainable private finance extended to developing countries, Africa accounted for a mere 0.1% of global green bond issuances in 2022, of which South Africa, Egypt, and Benin had a share of 90%. Nonetheless, it has been estimated that different types of sustainability bonds may generate around US\$ 3trn in climate finance opportunities in Africa over the 2020 to 2030 period (AfDB, 2023).

DFN and climate swaps are effective for reducing or restructuring a country's debt in exchange for commitments to its creditors to invest in environmental conservation and sustainable resource management, making these instruments ideal for larger business opportunities within the blue economy (e.g., marine restoration) and climate-smart agriculture (e.g., erosion control). However, most swaps in Africa have been for deals of less than US\$ 10mn p.a., highlighting the need for more participants and larger deals of between US\$ 100mn and US\$ 500mn in order to drive meaningful climate and green growth finance.

Green equity is invested in the shares of companies or ventures with business activities that are aligned to environmental sustainability goals in order to benefit from ownership in assets such as renewable energy and complementary technologies, eco-friendly fish farming, critical mineral extraction, and fintech solutions. **Insurance-linked securities** essentially convert risks of large-scale, catastrophic events into investment prospects, rendering them appropriate for commercial opportunities in climate-resilient infrastructure and blue economy initiatives where investor returns are associated with the occurrence of disasters. Conversely, **microfinance and microinsurance** products mostly cater for small-scale climate-smart agricultural and embedded energy solutions to farmers, SMEs, and rural populations by providing financial services to individuals and productive undertakings that lack access to traditional banking and insurance.

Carbon credit markets offset GHG emissions and help to fund emission reduction projects through the trading of carbon credits. In these markets, buyers lower their net GHG emissions by voluntarily or compliantly purchasing carbon dioxide equivalents (CO₂e) from willing sellers with projects that remove or reduce GHG emissions, especially in environmentally sustainable energy, agriculture, and blue economy industries. Africa experienced an 11% increase in global demand for its carbon credits in 2023, with its global market share expected to rise from 10% in 2021 to 25% or US\$ 7bn by 2030 (CPI, 2024a). The continent's role in carbon credit markets is discussed in more detail in **Chapter 4.4**.

Catalytic, additional, and/or a combination of private capital for climate adaptation and mitigation projects is typically mobilised by DFIs, multilateral development banks (MDBs), fiscal finances and/or government guarantees. Combining these funding sources with innovative sustainable financing instruments enables capital to be provided on concessional terms. This is achieved by reducing risks for private investors to enhance the fight against climate change and make climate-related actions more affordable, efficient, and effective for African countries, provided that they have policy and investment frameworks that are supportive of just transitions to low-carbon economies (AEF & AUDA-NEPAD, 2025; CPI, 2024).

CASE STUDY

InfraCo, Investment Fund at Casablanca Finance City

The Private Infrastructure Development Group (PIDG) is an innovative infrastructure project developer and investor which mobilises private investment into sustainable and inclusive infrastructure in Africa, south, and south-east Asia. PIDG is funded by the governments of the United Kingdom, the Netherlands, Switzerland, Australia, Sweden, Global Affairs Canada, and Germany. As one group offering multiple solutions across the infrastructure development lifecycle, PIDG is committed to accelerating action on the climate and nature crises, whilst supporting sustainable economic development.

The West and Central Africa team of PIDG's project development solution - InfraCo – is based in Casablanca Finance City, Morocco. InfraCo's current portfolio in Africa includes two operational solar plants in Malawi, as well as renewable energy projects under development in Ethiopia, Zambia, Zimbabwe, and Côte d'Ivoire. The company also supports delivery of off-grid energy and solar-powered irrigation across the continent. InfraCo is scaling up innovative clean cooking, electric mobility, and cold storage businesses, as well as delivering safe, affordable, marine transport initiatives.

Through its innovative credit enhancement facilities – InfraCredit Nigeria and Dhamana Guarantee Company - InfraCo has invested - alongside other PIDG solutions - to develop domestic capital markets in Nigeria and Kenya, to unlock new sources of local currency finance to accelerate the delivery of climate-resilient infrastructure.



4.3 Capital Alone Cannot Successfully Drive Sustainability

Despite Africa's high climate vulnerability and the number of innovative sustainable financing instruments available, the continent receives only 3.3% of global climate finance. Moreover, funding is concentrated in just 10 countries: Egypt, Nigeria, Ethiopia, Tanzania, Côte d'Ivoire, Morocco, South Africa, DRC, Kenya, and Uganda collectively accounting for 46% of total flows. Except for Uganda, none of these are among Africa's 10 most climate-vulnerable nations, including Somalia, Chad, Niger, CAR, and Sudan (CPI, 2024a). In this respect, the degree to which African countries can leverage innovative sustainable financing instruments are markedly influenced by their policy frameworks, differing levels of financial architecture (i.e., integration, institutions, rules, and policies) and infrastructure (i.e., operational, technical, and market-level institutions to enable transactions), as well as the technical capacities and skills complement of their labour forces.

Moreover, the average project size in Africa is between US\$ 2mn and US\$ 10mn, significantly smaller than in other emerging market regions or the global average of over US\$ 500mn (AfDB, 2023; CPI, 2024a). This reflects challenges in scaling projects due to limited private capital, weaker regulatory frameworks, higher perceived risks, and a less mature pipeline of bankable projects. Additionally, Africa's climate-related projects tend to be localised and community-driven, focusing on small-scale renewable energy, agricultural adaptation, and water management (CPI, 2024a).

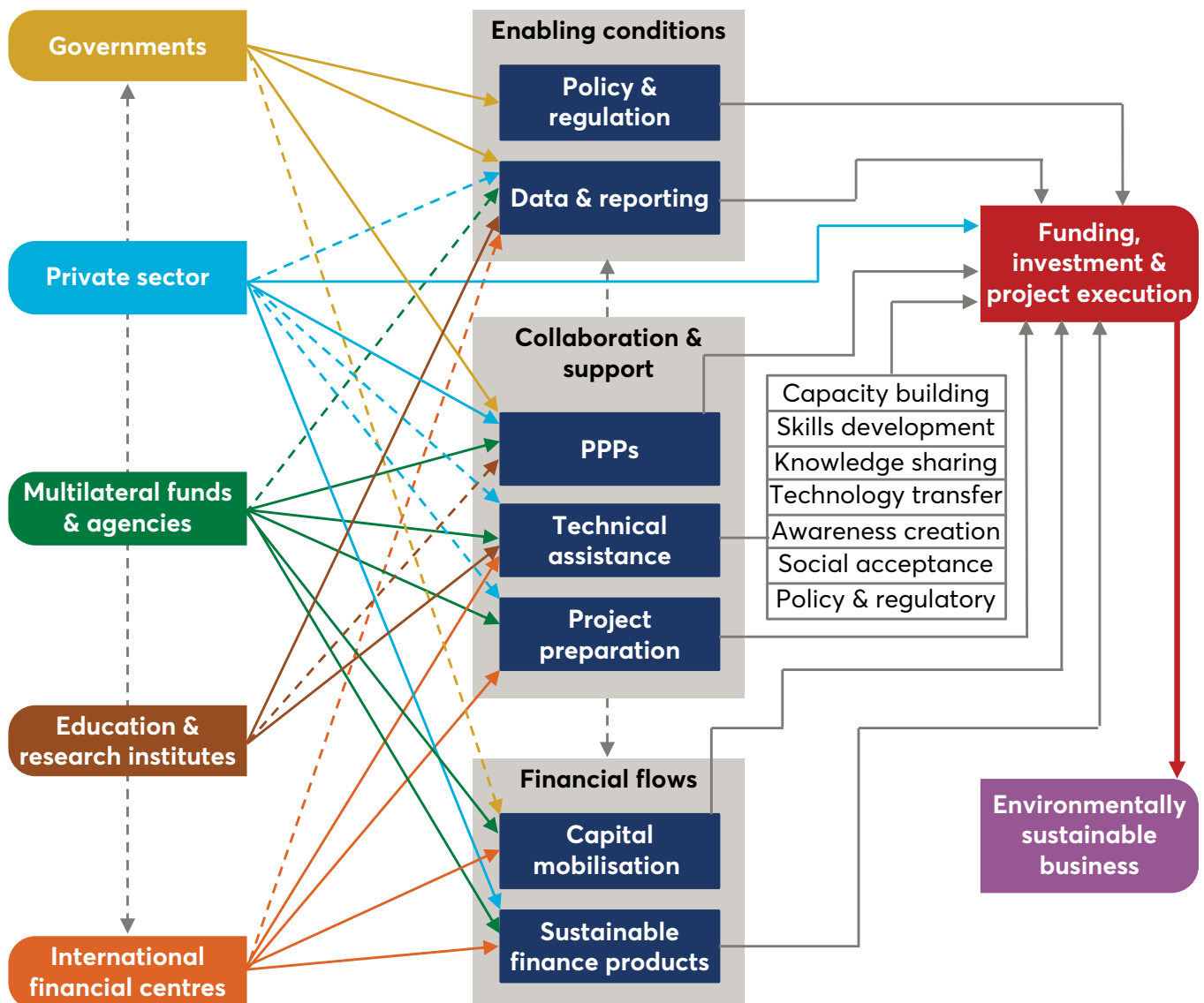
Therefore, the successful deployment of environmentally sustainable finance on the continent requires an ecosystem of support. It needs to be reinforced by technical assistance in the form of capacity building, skills development, technology transfer, and awareness creation. Project preparatory support is similarly important to enhance project viability, reduce perceived investment risks, and ensure that businesses and institutions have the information, expertise, infrastructure, and confidence to fund, implement, and scale sustainable solutions effectively.

Likewise, governments need to establish transparent and reliable policy, legal, and regulatory frameworks including through tax incentives, carbon pricing, and environmental laws and strategies as well as credible data and reporting systems to promote public-private partnerships (PPPs) and accelerate investments in low-carbon economies. Public and private sector participants should also leverage IFCs, global climate finance providers, and other donor-funded organisations and agencies, such as those under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC), to support the successful deployment of sustainable financing mechanisms into viable business opportunities (the role of IFCs in driving environmentally sustainable development transitions is described in more detail in [Chapter 4.5](#)). [Figure 16](#) illustrates the mutual relationships between various stakeholders, among which meaningful cooperation is required to mobilise capital for Africa's environmentally sustainable development, as well as key prerequisites for scaling-up and enhancing innovative financing in Africa.

Collaborating with development partners, private investors, regional banks, IFCs, governments, and DFIs can support the operationalisation of innovative financial instruments to enhance financing efficiency, lower debt servicing costs, mitigate project risks, and offer technical expertise for successfully deploying capital into environmentally sustainable projects. Although a few African countries, such as South Africa and Morocco, have been successful in implementing projects funded by green finance instruments, most states are typically sidelined due to weak institutional capacity, along with skills, capacity, technical, and technology deficits.

African countries also lack enabling policy environments that are aligned with clear planning and project preparation processes critical to informing priorities for climate investments. Thus, inadequate project planning, development, risk identification, and prioritisation are pointed obstacles to mobilising capital and implementing bankable projects for Africa's low-carbon development. As a result, too few projects reach financial close, with around 80% of infrastructure projects failing at the feasibility plan stage, leaving African institutions with high project preparation costs, contracting burdens, and limited capacity to attract further private investment (Abiru, 2021; AfDB, 2023; DBSA, 2025).

Figure 16: Multi-stakeholder cooperation and support for the deployment of sustainable financing



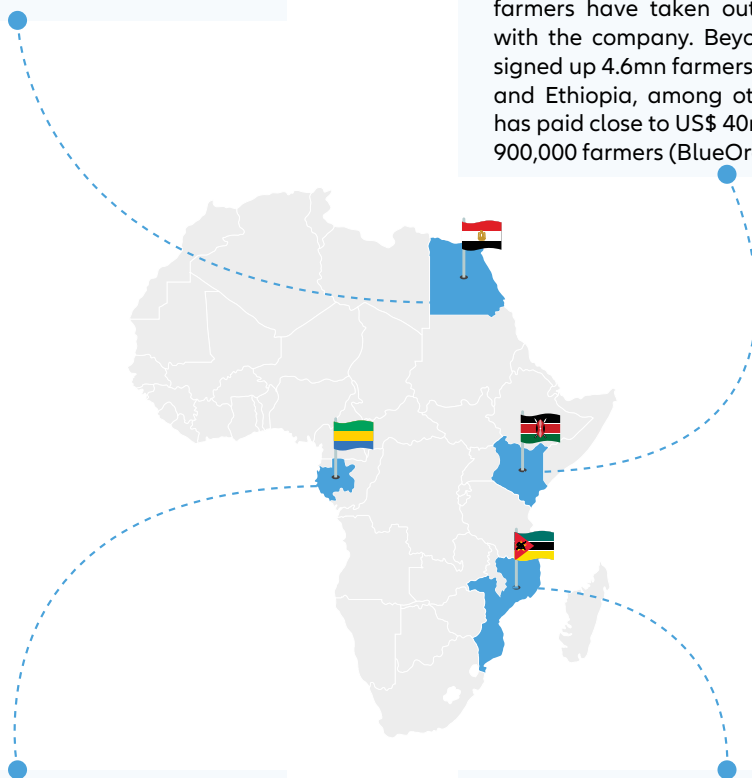
*Note: Dashed lines indicate secondary support linkages, and/or cooperation between stakeholders.

Project preparation covers the entire lifecycle from concept, feasibility, pipeline development, and technical and financial advisory to funding and execution, with a key focus on developing bankable projects that can attract investors (ICA, 2025). Effective project preparation and infrastructure development by borrowers attracts foreign investment, advances doing business, and generates employment. It also fosters inclusive socio-economic development, increases much-needed fiscal revenues, and strengthens international and intra-regional trade (Thusi & Mlambo, 2023).

African governments need to establish clear processes for identifying, updating, and communicating strategic national and regional priority projects that deliver environmental, social, economic, and financial benefits through increased climate resilience. Creating transparent, fundable project pipelines will build business confidence, attract concessional financing, and improve the scale and quality of climate-related infrastructure investments. Likewise, robust and adequately resourced project preparation facilities at the regional, national, and local levels would ensure that projects are finance-ready for wider PPPs.

EGYPT. The first country in North Africa and the Middle Eastern region to issue a **sovereign green bond** (US\$ 750m) in 2020. Three years later, Egypt was the first African country to issue a 3-year Sustainability Panda Bond worth US\$ 479m in 2023 (AFDB, 2023). The proceeds of the Panda bond were used to invest in low-carbon transportation, renewable energy, sustainable water, and financing for micro, small and medium-sized enterprises, among others.

KENYA. After identifying a gap in the **insurance** market, Kenyan and Dutch entrepreneurs partnered to create Pula – an agricultural insurance firm – in 2015. To deliver low-cost insurance, Pula applies a mobile application to register users and machine learning to cluster farmers with similar land characteristics and digital tools to assess claims. Farmers can insure crops against drought and floods for only US\$ 5 to US\$ 10 per month. Over 600,000 Kenyan farmers have taken out insurance policies with the company. Beyond Kenya, the firm signed up 4.6mn farmers in Nigeria, Zambia, and Ethiopia, among others. To date, Pula has paid close to US\$ 40m in claims to about 900,000 farmers (BlueOrchard, 2024).



GABON. In 2023, Bank of America completed its first **DFN swap** in Africa, which was also the continent's first-ever swap involving private creditors. The transaction refinanced US\$ 500m of Gabon's sovereign debt despite a military coup that same year. The bond's credit rating and lower debt servicing costs were enhanced by political risk insurance from the US International Development Finance Corporation. The funding raised through the issuance enabled Gabon to allocate US\$ 125m towards ocean conservation (Bank of America, 2023).

MOZAMBIQUE. A **debt-for-climate swap** agreement was announced with Belgium at COP 28 in December 2023. This followed Belgium's offer to cancel nearly half (US\$ 2.4m) of Mozambique's outstanding debt in exchange for investments in climate-related projects. The debt relief savings will be channelled towards building resilience among marginalised communities in rural and urban areas, clean energy transition efforts, and providing technical assistance and capacity building for disaster risk agencies. Belgium's development agency, Enabel, which handled the initiative, will manage the funds released from the swap and supervise the various projects (Enabel, 2023).

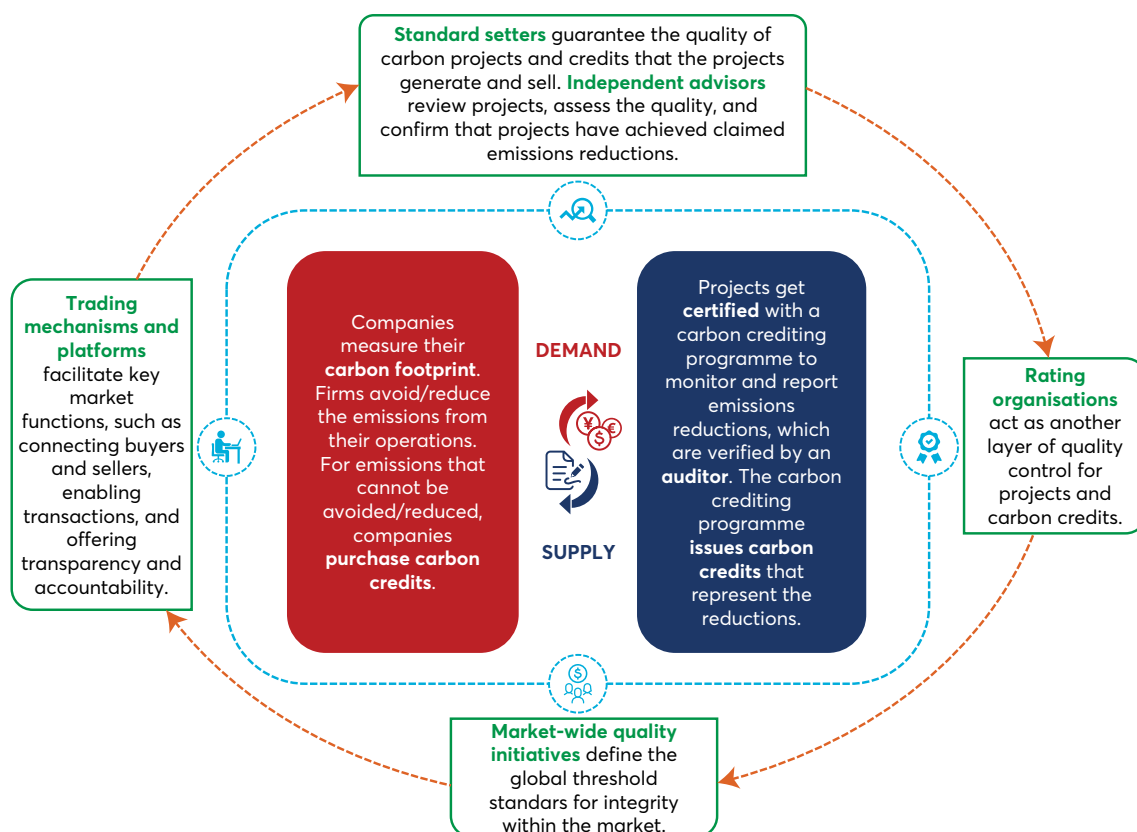
"To close Africa's climate financing gap by 2030, approximately \$213.4bn will need to be mobilised annually from the private sector, to complement constrained public resources." - AfDB (2023)

4.4 Carbon Credit Markets in Africa

Carbon markets refer to trading systems where companies or individuals sell and purchase carbon credits to compensate for their GHG emissions. Essentially, carbon credits are purchased from entities that remove or reduce GHG emissions. Carbon markets broadly take two forms: compliance or voluntary. Compliance carbon markets are created as a result of national, regional or international policy or regulatory requirements and fall under Article 6 of the Paris Agreement. These markets are regulated and legally require participants to purchase government-issued allowances or authorised offsets that match their emissions. Conversely, voluntary carbon markets (VCMs) refer to issuing, buying, and selling carbon credits on a voluntary basis. Credits are purchased to offset emissions in pursuit of corporate sustainability goals or individual commitments to transition to net-zero emissions.

As in any market, carbon credit markets have a demand and supply side. On the demand end of the spectrum, companies that cannot avoid or reduce their emissions purchase carbon credits. The supply side of the market typically includes credit issuers or project developers that generate or create carbon credits. Within the overall ecosystem, markets require scaled and sophisticated infrastructure to enable market functionality and ensure that projects are of a high standard to attain lasting and notable impacts. **Figure 17** provides an overview of the carbon market ecosystem.

Figure 17: Carbon credit market ecosystem



Sources: CPI (2025); Verra (2025); Oxford Economics Africa (2025)

4.4.1 Agreements announced at COP29

Negotiators at COP29 finalised a landmark agreement to establish a centralised carbon credit market under the supervision of the UN. The agreement marks a significant milestone by operationalising the rules for Article 6 of the Paris Agreement and advancing the implementation of a global carbon trading system. While the Paris Agreement set general principles for international carbon markets, it lacked detailed guidelines on their operations. Article 6 establishes a framework for countries to voluntarily cooperate in pursuit of their respective NDCs, which includes implementing market and non-market mechanisms to assist countries in reducing GHG emissions. Article 6 comprises the following three key approaches and mechanisms:

- **Article 6.2:** Establishes guidelines for nations to trade emissions removals and reductions through bilateral, multilateral, and unilateral agreements (otherwise known as cooperative approaches). Carbon credits under Article 6.2, referred to as Internationally Transferred Mitigation Outcomes (ITMOs), can already be traded between countries.
- **Article 6.4:** Aims to establish a global carbon credit market operated by a UN entity – also known as the Article 6.4 Supervisory Body (SBM) – that will be responsible for developing and supervising the requirements and processes needed to operationalise the mechanism. Once the market becomes operational, project developers will need to apply to register projects with the SBM, pending approval by the country of implementation and the SBM before UN-recognised carbon credits may be issued.
- **Article 6.8:** Focuses on non-market approaches for climate action, which allows countries to cooperate on climate actions without using market-based mechanisms.

The key difference between Articles 6.2 and 6.4 is that the latter allows for a centralised mechanism to accommodate carbon trading on a larger scale, while the former provides for more direct cooperation between countries. Furthermore, Article 6.4 aims to be similar to the Kyoto Protocol's Clean Development Mechanism (CDM), but with more stringent rules and enhanced applicability. The CDM will continue for a transitional period under Article 6, allowing CDM projects to transition to the Article 6.4 mechanism with its methodologies expected by mid-2025 (Carbon Market Watch, 2024; Woydt & Van Doorn, 2024).

4.4.2 The state of international carbon credit markets and developments across Africa

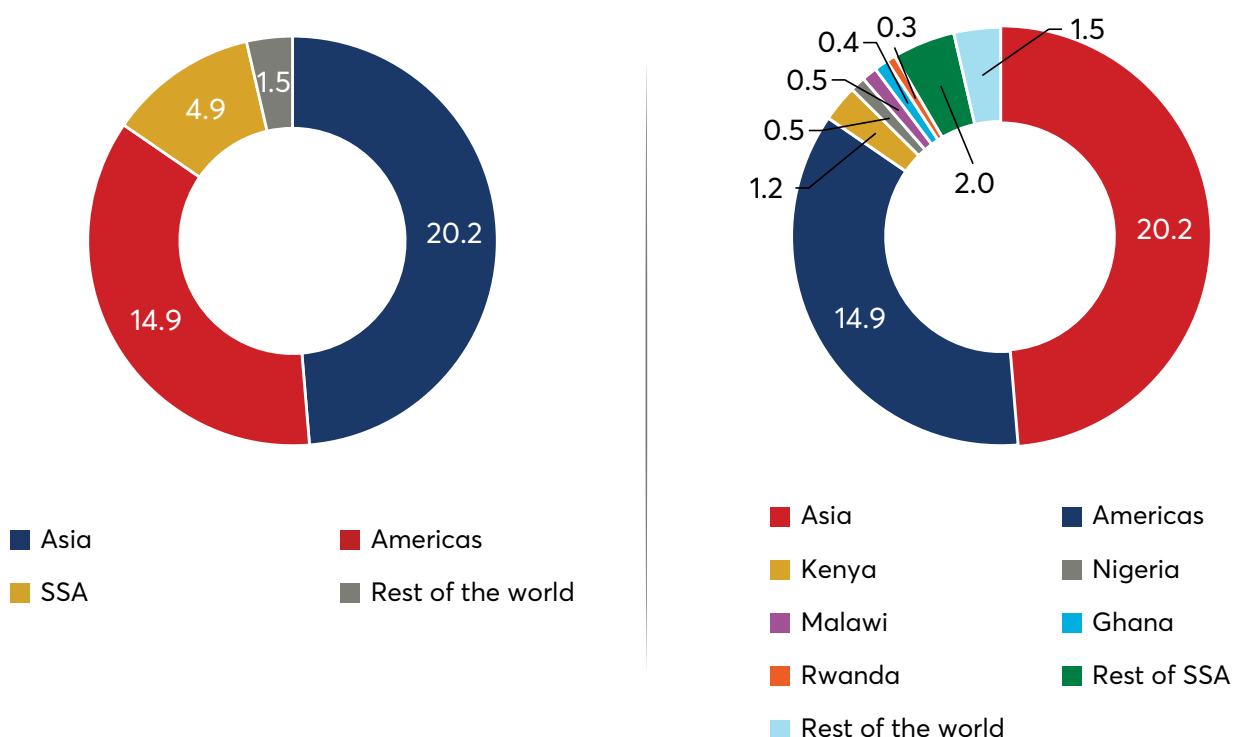
Estimates on the size of the global carbon credit market vary. According to MSCI (2024), nearly US\$ 42bn in capital expenditure was spent on the origination and development of almost 12,000 registered and pre-registered carbon credit projects between 2013 and 2023, with about half (or US\$ 22bn) occurring between 2021 and 2023. Asia, the Americas, and SSA accounted for over US\$ 40bn of the total spend from 2013 to 2023, while almost US\$ 5bn was spent on projects located in least-developed nations. Regarding North Africa, MSCI (2024) notes that the region is yet to emerge as a material supplier of carbon credits. **Figure 18** shows the breakdown of project capital expenditure between 2013 and 2023. In terms of capital raised and commitments, MSCI (2024) estimates that around US\$ 43bn was committed or directly raised to invest in carbon credit activities between 2021 and Q3 2024.

When considering voluntary markets, the World Bank (2024) notes that the market value of traded credits eased from US\$ 1.9bn to US\$ 723mn in 2023, mainly due to concerns around environmental integrity, which, in turn, is reflected in the lower weighted average price. The World Bank (2024) reported that weighted average prices remained below US\$ 6.00 per tonne of CO₂e.

Despite a positive long-term outlook, global carbon credit demand also dropped, by 22% in 2023, while supply increased by 9% during the year, with issuances rising from 283 megatons (one million metric tons) of carbon dioxide equivalents (MtCO₂e) in Q4 2021–Q3 2022 to 307 MtCO₂e in Q4 2022–Q3 2023 (ACMI, 2024). On the flip side, retirements (i.e., permanent removals of carbon credits from circulation to ensure that the emissions reductions are claimed only once) dropped from 182 MtCO₂e to 144 MtCO₂e over the same period.

Nonetheless, carbon credit projects have yielded noteworthy results. MSCI (2024) estimates that carbon projects registered since 2020 have an emission-reduction capacity of more than half a gigatonne per year, with registered projects having posted carbon reductions totalling 2.6 gigatonnes of CO₂e. Moreover, businesses that purchase carbon credits have also been found to decarbonise at an accelerated rate, reducing their emissions by 6.2% per year versus an average of 3.4% recorded by companies that do not (ACMI, 2024).

Figure 18: Project capital expenditure between 2013 and 2023 (US\$'bn)



Source: MSCI (2024)

African carbon markets have largely contradicted global trends. ACMI (2024) estimated that African carbon markets registered an 11% increase in demand over the preceding 12-month period versus a 1% decrease in supply. Energy efficiency and fuel-switching projects registered the highest growth rates, with retirements expanding by 56% to 10.8mn credits in total. Cumulatively, issuances stood at 48.8 MtCO₂e in Q4 2022–Q3 2023, up from 49.4 MtCO₂e in Q4 2021–Q3 2022, while retirements rose to 25.2 MtCO₂e from 22.7 MtCO₂e over the same period. Yet, despite rising demand, African carbon markets still comprised only 16% of global credit markets while the volume of retirements still has room to expand. ACMI (2024) estimates that Africa can feasibly retire up to 300 MtCO₂e of credits annually by 2030, potentially mobilising up to US\$ 6bn in capital and supporting up to 30mn employment opportunities. Moreover, CPI (2024a) noted that the global value share of African projects increased from 10% in 2021 to 26% in 2023.

Carbon credits or permit trading allow countries and companies to offset their GHG emissions by investing in projects that reduce or remove emissions elsewhere. For Africa, this could mean benefiting from the continent's vast natural resources. Africa's total technical potential for voluntary carbon markets is 2,400 MtCO₂e by 2030, according to industry estimates, but the continent issued only around 50 MtCO₂e of credits and retired an estimated 25 MtCO₂e over 2023-2024 (ACMI, 2024). This means there is considerable potential to deepen the market and for Africa to benefit from this development.

Countries across the continent have also made strides in developing carbon market regulations. For example, Kenya passed the Climate Change Amendment Act in 2023, which establishes a publicly accessible national carbon registry, while Ghana created the Ghana Carbon Registry. In Tanzania, the Carbon Trading Regulations formalised governmental involvement in carbon markets. The African Carbon Markets Initiative (ACMI) has also supported the development of carbon market activation plans in several countries, with plans in Kenya and Mozambique already launched.

EGYPT. The country established Africa's first regulated voluntary carbon market (VCM) in August 2024. The VCM creates a framework for the accreditation, issuance, listing, delisting, and trading of carbon emissions reduction certificates. In September 2024, the local Financial Regulatory Authority registered 12 new projects in its carbon emission reduction database, which enabled them to trade on Egypt's VCM. This paved the way for domestic firms to trade carbon credits, supporting Egypt's efforts to combat climate change. The Egyptian Biodynamic Association manages the voluntary carbon registry. This registry aims to guide developers in meeting standards for carbon reduction and allows for the issuance of certificates that can be traded via the Egyptian Exchange. The 12 projects are expected to produce around 13,291 carbon reduction certificates, representing a reduction of roughly 13,300 MtCO₂e (Egypt Today, 2024).

SENEGAL. By September 2024, the country had eight projects under validation and 14 projects registered with the local VCM, eight of which were renewable energy projects, four household projects, and two nature-based projects. One of the nature-based initiatives under validation is the ABC Mangrove Restoration Project, a 30-year blue carbon project aiming to add to climate mitigation and adaptation through reforestation and conserving 7,000 hectares and investing funds generated from selling carbon credits to benefit 15 villages (Climate Impact Partners, 2023). Senegal's VCM-registered projects assist in selling carbon credits to international entities.

American electrical vehicle charging network firm ChargePoint Holdings acquired 10,000 carbon credits from Senegal in March 2025 to invest in solar and wind energy. Senegal also signed agreements in 2023 whereby Switzerland purchases carbon credits for a volume of 500,000 MtCO₂e at a fixed price of US\$ 22.5/MtCO₂e annually until 2030 (DGB Group, 2023).

SOUTH AFRICA. The rainbow nation's Carbon Tax Act (2019) allows firms to use carbon offsets to reduce their carbon tax liability by 5% to 10% of actual emissions. If a company cannot reduce its emissions, the state allows it to offset them through credits for tax purposes. These must align with approved global standards and originate from domestic projects such as renewable energy and reforestation or afforestation efforts (Climate Scorecard, 2024).

In partnership with a US-based infrastructure provider, Xpansiv, the Johannesburg Stock Exchange (JSE) launched its Ventures Carbon Market in 2023 (JSE, 2025). In November 2020, Sasol, a JSE-listed global chemicals and energy company, acquired over 100,000 carbon offset credits from Bethlehem Hydro, a South African independent power producer; one of the country's first carbon credit transactions.

"With voluntary carbon credits valued at roughly \$2bn globally and potentially growing 5–50x by 2030, high-integrity carbon markets could provide significant benefits to African people and be a critical source of climate finance for the continent." - ACMI (2024)

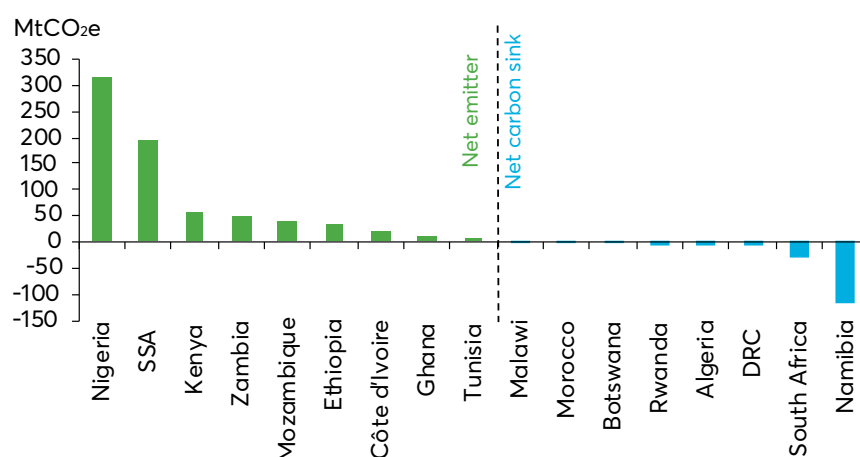
4.4.3 Challenges and opportunities in carbon credit trading in Africa

Africa has a unique economic, social, and environmental potential to benefit from carbon markets. Moreover, carbon credits could be considered a scalable option to increase climate finance across the continent. COP29 emphasised the importance of credits from nature-based projects such as reforestation and nature preservation, which Africa has in abundance. The continent has long been considered a 'net carbon sink' – meaning that Africa absorbed more carbon from the atmosphere than it released. However, there has been a steady increase in cumulative GHG emissions, including from land use, land-use change, and forestry (LULUCF) in Africa.

Therefore, Africa's sink capacity on a continental scale is declining and its position most likely changed from a small net sink to a small net source between 2010 and 2019. That said, individual countries could still hold significant sink capacity, especially those with abundant natural resources and minimal carbon emissions. With carbon emissions on the rise, the continent is deviating from the mitigation aims of the Paris Agreement, mainly due to its growing population and increasing emissions from fossil fuel burning and land conversion (Ernst et al., 2024). Thus, for the continent to increase international carbon trade demand from countries strained in meeting their respective GHG reduction targets, Africa will need to make a fundamental shift towards carbon neutrality and preserving its natural assets.

An effective metric for assessing a country's carbon sink capacity is determining the difference between total GHG emissions (excluding LULUCF) and cumulative GHG emissions (including LULUCF). This ultimately shows the contribution of LULUCF to overall emissions (i.e., a positive value means that LULUCF activities act as a net emitter, while a negative value represents a net carbon sink). This method isolates the impact of land-related activities on a country's emissions profile since it is important to distinguish LULUCF emissions due to their unique characteristics and notable role in GHG inventories (Climate Action Tracker, 2025). **Figure 19** shows the net LULUCF emissions or removals by several African nations and SSA in total in 2020.

Figure 19: Net LULUCF emissions or removals



Source: Calculations based on World Bank (2025)

SSA as a region had positive net emissions from LULUCF in 2020. Several key economies, such as Nigeria, Kenya, Ethiopia, Côte d'Ivoire and Ghana, also fell into this category. Countries like Nigeria and Ghana have among the highest deforestation rates in Africa, which diminishes their capacity to absorb GHG emissions. On the other end of the spectrum, countries such as the DRC, Morocco, Botswana, and Rwanda ranked as carbon sinks. The DRC, with the largest concentration of forest area, also experiences significant rates of deforestation, which ties into its diminished sink capacity. Desert countries typically are carbon sources or have neutral carbon balances. This is evident in nations like Algeria, Botswana, and Morocco, which have minimal carbon sink capacity.

The framework adopted at COP29 will facilitate access to international carbon markets, enabling African countries to leverage their rich natural resources and biodiversity for meaningful economic gains. With limited electricity access but vast renewable energy potential, Africa can utilise carbon trading to fund large-scale clean energy projects, thereby reducing reliance on fossil fuels and expanding energy access. Furthermore, increased investment could yield higher economic returns and empower Africa to transition away from carbon-intensive industries. The continent's predominantly rural demographics could also be used in its favour. Carbon credit projects often directly benefit rural communities through employment opportunities, lower energy costs, and enhanced health outcomes. Revenues from international carbon markets are also partially allocated to adaptation efforts for impoverished countries.

Despite the new framework, several factors could undermine the effectiveness of the carbon trading agreements reached at COP29. A key issue is consensus on methodologies for carbon removal and eligibility criteria for generating credits. For instance, there are no specific time frames or minimum standards for carbon storage, while uncertainty about methodologies may discourage market participation. Additionally, the timelines for implementation remain unclear, raising concerns about transparency and accountability within the system. Moreover, weak enforcement mechanisms, such as limited penalties for rule violations, do not adequately address credibility issues stemming from past scandals involving fraudulent offsets. Rising trading costs may also reduce the carbon market's size and effectiveness. Another challenge is market stability, as host countries can revoke authorisations for carbon credits post-transfer, creating uncertainty.

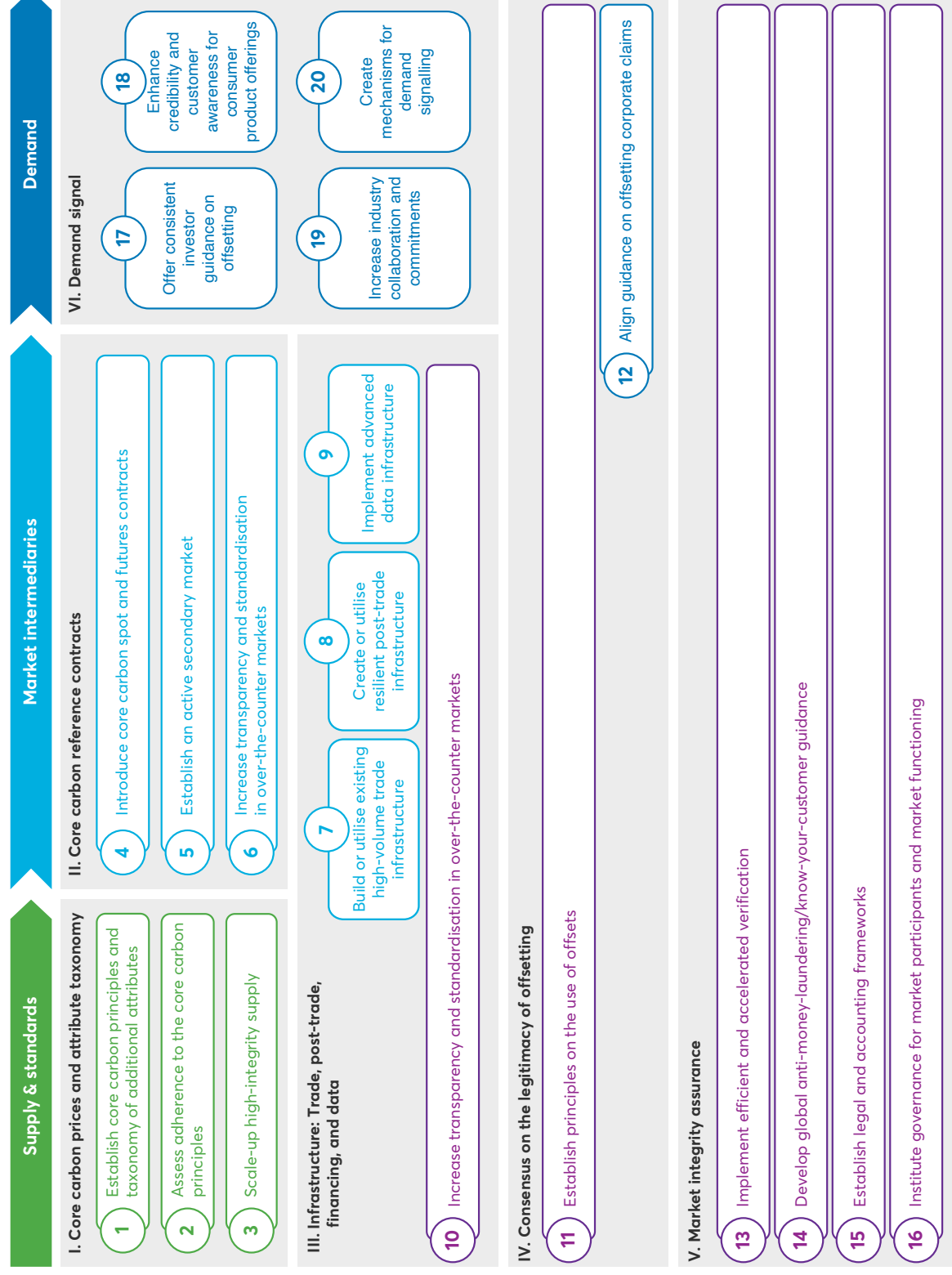
The continent has attempted to leverage carbon trading markets before COP29. ACMI, launched at COP27, aims to create a supportive ecosystem for African carbon markets. However, several structural barriers continue to limit Africa's ability to fully benefit from carbon credits. One major challenge is the high cost of compliance. African countries often struggle with limited technical expertise, high certification costs, and difficulties in meeting international standards. Inadequate infrastructure for monitoring, verifying, and reporting emissions reductions further hinders the successful development and maintenance of carbon credit initiatives. Institutional weaknesses and corruption pose another challenge, as they risk diverting climate mitigation funds away from local communities and sustainable development projects to wealthier stakeholders or foreign companies.

One of the key risks to the widespread adoption of carbon credit trading and offsets in Africa is double counting, where credits are claimed by multiple parties. Another risk is difficulty in ensuring that projects deliver genuine and verifiable emissions reductions. Poor quality control can lead to 'greenwashing', where entities claim environmental benefits from credits with minimal real impact, undermining the market's credibility. Additionally, ensuring fair pricing for carbon credits, especially in developing countries, is critical to avoid undervaluation, which could diminish the credits' effectiveness and sustainability.

African carbon credits are undervalued compared with their global counterparts due to perceived higher risks and lower demand. This under-pricing reduces potential revenues for African projects. Furthermore, an oversupply of low-quality carbon credits risks depressing prices further, diminishing financial incentives for new initiatives. Social and economic issues, including land-use conflicts, add to these barriers. Large-scale projects such as reforestation can displace communities or restrict land access, causing disruptions. Unclear land tenure systems in many African countries exacerbate these challenges, making it difficult to implement and sustain carbon credit projects.

In 2021, WEF released 20 recommendations across six steps for scaling up VCMs, while enhancing transparency, verifiability, and robustness. These recommendations are summarised in [Figure 20](#).

Figure 20: Recommendations to scale up VCMs



Sources: : WEF (2021); Oxford Economics Africa (2025)

4.4.4 What can Africa expect from a well-functioning carbon credit market ?

A well-implemented, fully global carbon credit market could be a powerful tool to incentivise lower carbon emissions in countries and entities that are the highest polluters while driving investment in regions that are the most in need of it, especially Africa. Estimates by the International Emissions Trading Association (IETA) found that Article 6 of the Paris Agreement has the potential to reduce the total cost of implementing NDCs by US\$ 250bn per year by 2030 (IETA, 2019). However, not all funds will go to Africa, and the global carbon credit trading market on its own will not be enough to meet cumulative climate funding needs.

Even so, carbon credits have the potential to not only generate revenue across the continent but also diversify income streams. This is particularly important given the strained fiscal positions of many African countries and heightened social relief-related expenditure. The continent also suffers from high unemployment and a low skill base. An uptick in carbon offset projects, enabled through Article 6, will create employment opportunities in sectors critical for the transition to environmentally sustainable practices, such as renewable energy and energy storage, climate-smart agriculture, and forest management. Moreover, African countries would also need to develop expertise in carbon project management, monitoring, reporting, and verification, enabling local capabilities for managing climate-related projects.

VCMs represent an opportunity to attract private funding in support of African countries' transition to low-carbon economies. Carbon credits resulting from these markets have the potential to attract financial investors and to mobilise capital from large firms aiming to offset their emissions that cannot be eliminated immediately. According to CPI (2024a), global VCMs may reach US\$ 30bn by 2030, with Africa capturing around US\$ 7.5bn (or 25%) of this amount. Although this is not enough to plug the investment shortfall on the continent, the market could become much larger if compliance improves and national trading under Article 6 is established.

Carbon credits that are linked to tangible and verifiable emissions reductions and removal can be a valuable revenue stream for countries, particularly those with greater carbon sequestration potential and embarking on energy transitions. Although wider than the forestry sector, VCMs can also be a zero-cost option for African countries to strive towards their reforestation targets. The effective operation of voluntary carbon markets will require institutional strengthening; improved monitoring, reporting, and verification processes; standards; the identification of preferred technologies; approval procedures; taxation systems; and strong oversight mechanisms to assist the region in capturing a larger share of the global VCM.

Developments such as the EU's Carbon Border Adjustment Mechanism (CBAM), the potential shift in global commitments to the Paris Agreement, and the risk of reduced official development assistance and foreign aid amid current geopolitical developments present challenges but also opportunities for scaling carbon markets. Since CBAM imposes a price on imports of certain goods from countries without comparable carbon pricing mechanisms to avoid emissions leakage (i.e., when stringent climate policies in one region lead to increased emissions in other jurisdictions with looser regulations, as industries relocate to avoid compliance costs), there could be an upswing in demand for carbon credits by countries that seek to avoid tariffs. This may also incentivise nations to develop carbon pricing and credit systems aligned with the CBAM requirements while encouraging the development of universal carbon pricing standards and frameworks.

Turning to the potential global shift away from the Paris Agreement, the absence of robust global cooperation may result in countries having to strengthen their national carbon markets and domestic policies. This could lead to increased market fragmentation, necessitating regional or bilateral agreements to sustain market liquidity. Moreover, lacking global cooperation within governmental spheres provides an opportunity for the private sector to drive demand for carbon credits.

4.5 The Role of Financial Centres in Driving Sustainable and Just Transitions

As discussed above, among the impediments to transitioning towards environmentally sustainable, low-carbon economies in Africa are inappropriate regulatory frameworks, limited institutional and technical capacities, inadequate project preparation, and underdeveloped local capital markets. Zioło et al. (2024) find that transition costs can be controlled by appropriately deploying capital market instruments. This implies that governments and financial sector regulatory bodies should develop their capital markets, ensure they are easy to use, and are able to employ modern sustainable financing instruments.

IFCs aim to address these challenges and help target much-needed investment flows. An IFC is a hub for international business activity. More specifically, it is a city or geographic area that hosts a concentration of financial institutions facilitating cross-border financial flows and providing support services such as law, accountancy, technical assistance, and technology (BIS, 2022). IFCs function within the regulatory framework applicable to their location and the broader economic ecosystem that the financial sector cluster sustains.

IFCs can specialise in different aspects of financial services such as asset management, insurance, banking, personal wealth advisory, deal structuring, and fintech solutions. Additionally, IFCs help to create conducive environments for doing business, such as by offering legal and regulatory support, providing tax incentives, facilitating stakeholder engagements and marketing efforts, as well as creating talent pools through capacity building or skills development initiatives. Therefore, not only do these centres provide essential services to international individuals and companies, but they also benefit their local economies and national development efforts.

IFCs constantly evolve due to technological modifications and changing demands for different forms of financing. Given the transformative nature of the global technological and socio-economic landscape, there is a growing need for IFCs to support development transitions. International trends, including the proliferation of new technologies, the need to combat climate change, and ESG considerations, require leadership to facilitate and promote the adoption of financial innovations. While every US\$ 1 invested in climate adaptation can generate up to US\$ 10 in economic benefits through multiplier effects, many adaptation projects are high-risk, and it can be difficult to source financing for such projects (Global Centre on Adaptation, 2023). In that regard, IFCs play a key role in advancing the UNFCCC framework by promoting effective partnerships between developed and developing countries, thereby enabling the grant and concessional funding flows needed to implement NDCs.

Multilateral and bilateral funding are central to enhancing economic resilience against climate change. Still, the development benefits of climate action will only materialise if African countries can effectively crowd in private capital. This emphasises the need to embrace financial innovations. Accordingly, IFCs and the funding they facilitate have a vital role in supporting environmentally sustainable development transitions.

4.5.1 Economic benefits of IFCs

The benefits of IFCs are manifold, as they provide international access to financial services and efficient regulatory regimes that enable trade, lower costs, and help reduce the investment risk of environmentally sustainable projects. IFCs make a difference by providing the legal platform through which investors from different countries can come together and invest in African countries that lack robust legal systems and conducive policy settings. In this way, IFCs lower transaction costs and enable deals that might otherwise not have occurred, making African economies more productive and resilient against external shocks (Cato Institute, 2024).

Recent estimates of investments facilitated by IFCs are scarce. Notwithstanding, IFCs mediated additional finance to developing countries worth US\$ 1.6trn between 2007 and 2014, boosting their nations' economic growth by US\$ 400bn and tax revenues by US\$ 100bn during that period (BVI, 2021). Strong investment flows to Africa mediated by IFCs also solidify the view that they are impartial hubs for funds to be pooled from several investors and collectively invested in African countries. Over the past decade, IFCs across the world have been key in driving overall investment growth. While no contemporary official statistics are available, some experts suggest that IFCs facilitate roughly a third of all global sustainable investments.

While overseas IFCs have played a key role in channelling green and sustainable investments to Africa over the past few decades, African IFCs have in recent years bolstered their stature in the global arena. In the latest Global Financial Centres Index (GFCI, 2025), ratings for all African IFCs continued to rise, demonstrating that they have become strong regional financial hubs over the past decade. The GFCI surveys respondents on metrics such as business environment, human capital, infrastructure, taxation, reputation, and financial sector development. Collaboration among African IFCs have in turn assisted in growing the size of their domestic capital markets and advancing sustainable investments on the continent.

The improvements in the ratings of African IFCs reveal the implementation of financial sector reforms, enhanced business conditions, fewer regulatory challenges, and improved market access. It also exhibits the provision of incentives to attract investors and the upskilling of locals in the financial services industry across the jurisdictions of these IFCs. The improvements are especially evident in Morocco, Mauritius, and Rwanda, with these nations, in addition to South Africa, having the top GFCI rankings in 2025 among African countries.

While the GFCI covers macroeconomic factors at a national level, the Global Green Finance Index (GGFI, 2025) assesses IFCs at a microeconomic or product level. Both quantitative data and worldwide finance professionals' assessments of the quality and depth of green finance offerings in IFCs are captured in the GGFI rankings. These aspects ensure that ratings are independent of an IFC's market volume. Most African IFCs are comparatively balanced for depth and quality, although Casablanca had the highest rating within Africa, followed by Mauritius, Kigali, Johannesburg, Cape Town, Nairobi, and Lagos.

Although IFCs in Africa are at different stages of development, they have largely improved their capabilities to compete on the global scene, where each African IFC brings different strengths to the table. Reinforcing ESG integration and sustainability reporting, issuing innovative sustainable finance instruments, enhancing regulatory environments, and establishing green taxonomies, among other initiatives, have contributed to rising GGFI ratings in recent years. Also, strong ties with overseas financial institutions have boosted the profile of African IFCs, paving the way for Africa's increased participation in the global economy. As Africa's IFCs continue to develop and expand, competition is likely to intensify, which would help drive overall progress in Africa's financial services sector and attract greater volumes of quality finance to the continent on a sustained basis.

IFCs also add competitive pressures by encouraging improved laws and regulations in onshore economies (Cato Institute, 2024). Hence, increased competition among African IFCs can be seen as a catalyst for countries to improve their legal and business environments in order to attract increased economic activities. A secure legal environment based on international standards is critical for attracting long-term, environmentally sustainable capital. Putting attractive tax incentives in place has also been crucial in lifting the GFCI rankings among African IFCs.

4.5.2 IFCs collaborate to help drive environmentally sustainable development transitions

IFCs operate in dynamic markets, which change over time in response to economic and political factors affecting their operations. IFCs constantly evolve to changing demand for financial products, services, and technological advancements, while they have also shifted their focus to sustainable financing. In 2017, the Financial Centres for Sustainability (FC4S) network was officially launched in Casablanca, Morocco. At inception, 11 IFCs adopted the Casablanca Statement on Financial Centres for Sustainability, agreeing to promote action in their financial centres on sustainable finance. This network has since grown to 45 members in 2024, including IFCs in Egypt, Kenya, Morocco, Nigeria, and Rwanda, and collaborates to achieve the SDGs and the Paris Agreement. The FC4S empowers IFCs to accelerate the growth in sustainable finance by delivering research on financial innovations, offering guidance on best practices, and providing advice.

Members of the FC4S remain committed to co-creating an enabling environment via active engagement with policymakers and regulators. According to the UN Development Programme (UNDP, 2023), FC4S members played a pivotal role in the global sustainable debt market, having facilitated 54% of sustainability bonds worldwide in 2023.

Therefore, IFCs, like CFC, can act as pivotal hubs to streamline and mobilise sustainable finance for business opportunities in several ways. Firstly, they concentrate financial expertise and infrastructure, enabling the efficient development and distribution of innovative financial products such as ESG-focused investment funds, sustainability bonds, and sustainability-linked loans. By fostering a conducive regulatory environment and attracting diverse financial institutions committed to sustainability, IFCs can create a marketplace where these instruments are readily available to finance low-carbon and climate-resilient projects across various sectors.

Secondly, IFCs can be key to knowledge sharing, capacity building, and technology transfer, which are essential for the deployment of sustainable finance mechanisms. They can host centres of excellence, facilitate training programmes, and promote the adoption of best practices in ESG integration, climate risk assessment, and impact measurement. IFCs are well-positioned to encourage education programmes and professional training on sustainable finance, given their good relations with governments, industry experts, academia, and relevant individuals (FC4S, 2021). By attracting international expertise and fostering collaboration between local and global financial players, IFCs can accelerate the development of a skilled workforce capable of structuring and managing sustainable finance transactions. Apart from intermediating sustainable finance deals, IFCs have also developed guiding principles for taxonomies, collaborated on financial technology solutions for environmental challenges, and served as transactional mediators between businesses in Africa and global investors for the continent's climate adaptation, mitigation, and resilience.

The World Alliance of International Financial Centers (WAIFC) announced the establishment of the Africa Roundtable in 2024, which will initially be a collaboration of IFCs in Nigeria, Mauritius, Morocco, and Rwanda. The aim is to improve these IFCs' competitiveness across the continent, conduct

research, share best practices, and advocate for regulatory coordination among member countries to promote intra-African investment, including in aspects relating to environmental sustainability. This initiative could further advance the capabilities of African IFCs to support their members and African countries at large to adopt more sustainable financing mechanisms.

Thirdly, IFCs can encourage PPPs by providing a neutral and trusted platform for governments, private sector entities, and multilateral climate funds to connect and structure collaborative projects. Their established legal and regulatory frameworks, coupled with their ability to attract global investors, can de-risk sustainable infrastructure and other green projects, making them attractive for private capital. Moreover, IFCs can actively promote such partnerships by creating dedicated platforms and offering expertise in structuring bankable and sustainable projects in key sectors for the wider African continent. Policymakers and international investors can rely on IFCs to pilot transition efforts, given that they concentrate on many components of the financial system. The PPP deals brokered by IFCs have served as the foundation to provide credible and effective enabling environments for risk reduction, capital mobilisation, and sustainable finance advancements (FC4S, 2023).

Furthermore, IFCs can significantly enhance data and reporting standards for sustainable investments. By promoting the adoption of globally recognised ESG disclosure frameworks and facilitating the collection and dissemination of reliable sustainability data, they can improve transparency and reduce greenwashing risks. This increased transparency is crucial for attracting institutional investors and ensuring that financial flows are genuinely contributing to environmentally sustainable outcomes. African IFCs can position themselves as regional leaders in ESG data and reporting by championing relevant standards and investing in the necessary infrastructure.

Finally, IFCs can actively engage with multilateral climate funds by providing them with efficient channels for deploying capital and accessing a pipeline of well-structured, sustainable projects. By understanding the specific requirements and priorities of these funds, IFCs can tailor financial products and project preparation services to channel the flow of international climate finance to where it is needed the most. Africa's IFCs can therefore strengthen their relationships with global climate funds, positioning themselves as key partners for deploying their resources across the continent.

IFCs add value by clustering financial activities such as banking, capital markets, investing, insurance, and the rest of the ecosystem of professional services (FC4S, 2021). Given their strategic position, IFCs can leverage climate-related financial innovations (refer to Chapter 4.2) and their network of critical partners to increase environmentally sustainable funding to Africa. Partners typically include government officials, technical experts, academics, financial market participants, sector-specific public regulators, representatives of environmental organisations, civil society groups, and entities such as the Climate Bonds Initiative, UNFCCC, COP, and UN Environment Programme (UNEP).

4.5.3 Operating in an increasingly fragmented world

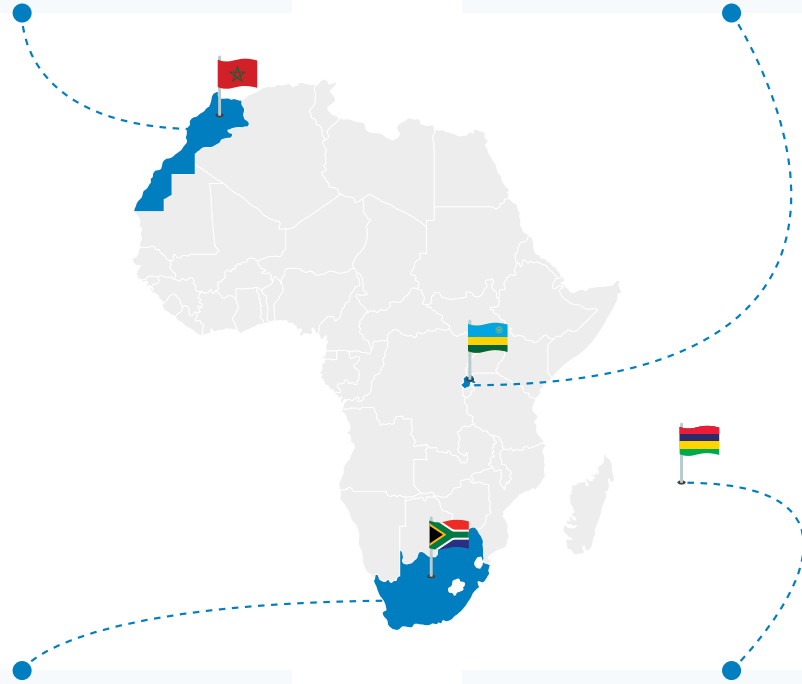
Expanding sustainable finance requires more than just developing new financial instruments; it also necessitates a behavioural shift (FC4S, 2021). According to the GGFI (2025), government regulations and statutory requirements are more influential in changing corporate behaviour than a change in consumer preferences. Therefore, by changing the regulations of their jurisdictions, IFCs can be pivotal to shifting commercial behaviour to be more sustainable and environmentally conscious.

Since the 1970s, enhanced financial integration has led to external assets and liabilities growing faster than global GDP, especially in IFCs (BIS, 2023). Yet, recent events, including the coronavirus outbreak in 2020, disruptions to global supply chains in 2021, the ongoing war in Eastern Europe, the subsequent energy and inflation crisis, an intensification of conflict in the Middle East in 2024, the threat of a global tit-for-tat trade war, and overall heightened risk of geopolitical tensions in 2025 have triggered deglobalisation. These events changed international economic and political relations, posing a risk to the effectiveness of IFCs.

However, a complete separation of international financial relations is not possible, since no single region is entirely self-sufficient (WAIFC, 2025). As central institutions with the ability to organise actors and coordinate efforts, it is necessary to set shared priorities among all financial institutions and scale up sustainable finance. By connecting multiple stakeholders, organising local private and public entities, and disseminating standards, the coordination power of IFCs will be key to supporting environmentally sustainable transitions in an increasingly fragmented world.

MOROCCO. CFCA and state-owned financial institution Caisse de Dépôt et de Gestion signed an MoU in September 2024 to establish a regional VCM, aligned with the Paris Agreement. This project supports the country's efforts to position itself as an international leader in sustainable finance in Africa. By taking advantage of Africa's abundant natural resources, high-quality, low-cost carbon credits can be generated, enabling Morocco's future VCM.

RWANDA. In January 2025, the Luxembourg Green Exchange hosted training sessions in collaboration with the Rwanda Stock Exchange. Training was provided on sustainable debt instruments and green taxonomies. This initiative aimed to improve the capacity and develop competencies within the Kigali International Financial Centre (KIFC). Over 60 KIFC participants attended the training (Luxembourg Development Agency, 2025).



SOUTH AFRICA. Rand Merchant Bank (RMB) was the sole lead manager and sustainability coordinator for FirstRand Bank's inaugural social bond issuance in November 2024. The issuance raised US\$ 144.6m across 3-, 5- and 7-year maturities. The proceeds of the bond will be allocated to FNB's lending to micro, small and medium-sized enterprises and affordable housing customers, as well as RMB's information and communications technology projects, which focus on delivering connectivity in previously underserved or disadvantaged areas (RMB, 2024).

MAURITIUS. The Mauritius International Financial Centre (MIFC) facilitated about 9% of Africa's total FDI. This highlights MIFC's role as a crucial intermediary in helping African countries gain access to capital by reducing the risks and costs associated with cross-border dealings. African countries that benefited from investment mediated by the MIFC in terms of job creation include: Kenya (1.6m jobs created), Nigeria (470,000), Tanzania (250,000), South Africa (240,000), Côte d'Ivoire (200,000), and Cameroon, Ethiopia, and Ghana (120,000 each). In turn, these additional jobs collectively created around US\$ 30bn in added spending power for people in these African countries (MIFC, 2021).

"Financial centres with progressive policies and regulations that support green finance, such as green taxonomies, mandatory climate risk disclosures, and incentives for sustainable investment, are better positioned to develop and expand their green finance markets." - GGFI (2025)

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BUSINESS RECOMMENDATIONS
FOR NET-ZERO TRANSITIONS

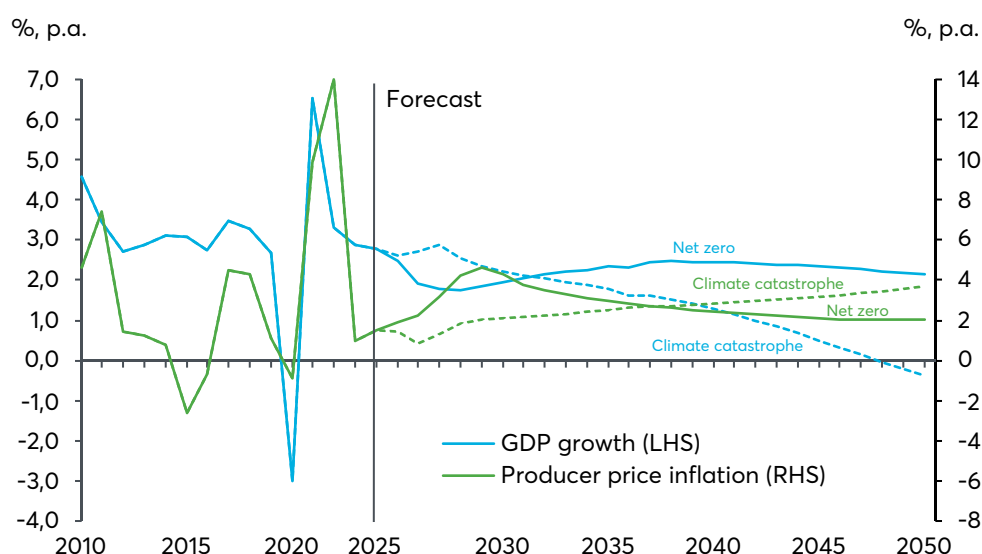
BUSINESS RECOMMENDATIONS FOR NET-ZERO TRANSITIONS

5.1 Economic Implications of Managing Sustainable Transitions in Africa

At the broadest macroeconomic level, businesses should recognise that the performance of African countries over the medium to long term will be inextricably linked to progress in global sustainability transition efforts. Not only will government and businesses' commitment towards sustainable development potentially inform a new investment paradigm, but the inability to achieve global emissions targets will have a detrimental impact on commercial operations and the continent's economic prospects. Oxford Economics' climate scenarios indicate how the macroeconomic context may differ under various climate outcomes.

The economic outcomes are most disparate when comparing two extreme scenarios: net-zero and climate catastrophe, indicated in **Figure 21**. In the net-zero scenario, carbon neutrality is achieved in 2050 through early policy action, technological advances, and global coordination. Global warming is limited to around 1.6°C above pre-industrial levels. In the climate catastrophe scenario, governments fail to meet their policy pledges, and the concentration of GHGs in the atmosphere intensifies. Global temperatures warm by 2.3°C by 2050, causing severe physical damages that accelerate over time.

Figure 21: Global GDP growth and producer price inflation under two climate scenarios



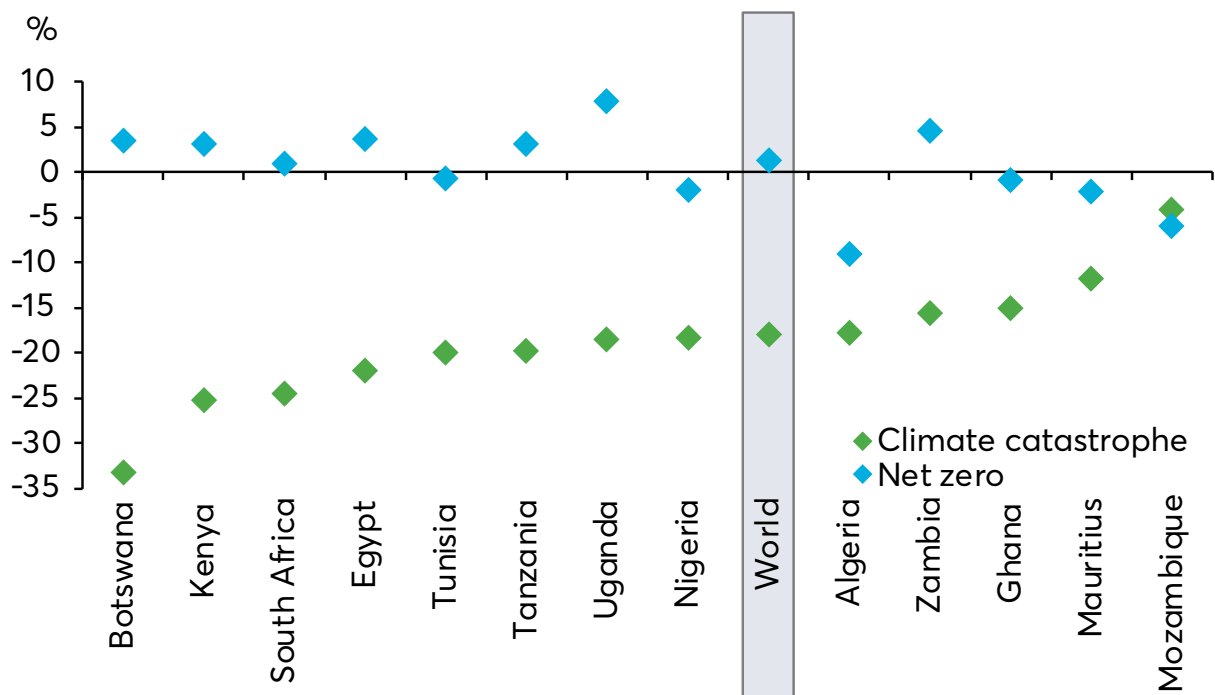
Source: Oxford Economics Africa (2025)

When comparing these two scenarios, a key takeaway is that the transition will come at a short-term cost, mainly driven by carbon prices. Carbon taxes help to reduce emissions, but in doing so, they push up producer price inflation. Higher expenses, coupled with initially inelastic demand for fossil fuel products, and the associated sharp rise in electricity prices lead to considerable inflationary pressures. At first, real GDP weakens relative to baseline levels as inflation eats into real incomes, but this slowly fades away as economies transition away from taxed, high-carbon energy sources.

In contrast, the climate catastrophe scenario entails much less upward pressure on producer prices over the medium term. However, the global economy also fails to benefit from the longer-term cost and structural development gains associated with the green transition. Furthermore, more frequent weather anomalies result in much lower productivity growth over the longer term, which weighs on global GDP growth in this scenario.

On the African continent, these dynamics suggest that global transition efforts will boost economic growth due to increased investment and stronger productivity growth amid the reduced intensity of adverse weather shocks. However, as shown in [Figure 22](#), there is a visible asymmetric negative impact if global transition efforts disappoint. For example, relative to a baseline scenario in which average global temperatures reach 1.9°C above pre-industrial levels, real GDP is expected to be nearly a third lower in Botswana by 2050. The corresponding figure for Kenya is around 25%. These figures account for both the economic repercussions of more regular weather anomalies and the broader economic impact of stronger demand for fossil fuels.

Figure 22: Real GDP deviation from baseline by 2050



Source: Oxford Economics Africa (2025)

At the other end of the spectrum, Mozambique's GDP is expected to be slightly lower than the baseline in both the net-zero and climate catastrophe scenarios. In the net-zero scenario, a reduction in demand for hydrocarbons will weigh on the country's coal and gas industries, whereas in the climate catastrophe scenario, stronger demand for these goods will only partly offset the productivity losses associated with more regular economic shocks.

These findings point towards an important implication for businesses: a changing climate will undoubtedly result in macroeconomic volatility regardless of progress on the transition front. The ability to adapt will be key. This necessitates building in buffers when budgeting and prudent scenario planning. In addition to putting a premium on the capacity to adapt, a changing climate and global decarbonisation efforts will be characterised by several features that businesses and governments need to be cognisant of at least and capitalise on at best.

5.2 Recommendations for Business to Navigate Decarbonisation Drives

Concessional finance for sustainable development supports Africa in addressing the quadruple paradox of climate change. This is particularly true given the continent's extreme vulnerability to climatic risks, weak structural resilience, and multidimensional poverty. The constrained fiscal settings of most African governments and the inadequate availability of, and access to, international climate finance pledges further necessitate leveraging private capital and aligning its disbursement with long-term economic, environmental, and socio-economic objectives.

De-risking investments and mobilising sustainable private finance can help to unlock the needed capital for Africa's climate resilience and to transition to low-carbon and inclusive economic growth and development. To do so, the context, evidence, and findings of this study offer several interrelated recommendations to support the private sector in taking advantage of environmentally sustainable business opportunities. These recommendations are outlined in **Figure 23** and briefly expanded on in **Section 5.2.1** to **Section 5.2.10**.

Figure 23: Recommendations for business to navigate the road to net-zero in Africa



Support enabling environments for increased private investment, collaboration, and PPPs, including by mainstreaming climate resilience into policy and implementation frameworks



Reinforce project preparation capabilities and investors' visibility of viable project pipelines



Mobilise increased public and private concessionary capital through innovative sustainable financing mechanisms to help close funding gaps, free up fiscal space, and implement NDCs



Take advantage of and deploy the sustainable financing mechanisms despite recent emerging geopolitical dislocations from combating global climate change



Establish or expand functional national and regional carbon credit markets, while ensuring alignment with Article 6.4 of the Paris Agreement



Leverage IFCs to streamline the deployment of sustainable finance mechanisms into bankable opportunities



Promote the role of the diaspora and remittances to support sustainable development



Create platforms to match skills demand and supply with sustainable business prospects



Address data shortcomings and reinforce disaster risk reduction and management systems



Conduct ongoing capacity building, awareness creation, and technology transfer to ensure effective climate action



5.2.1 Support enabling environments for increased private investment, collaboration, and PPPs, including by mainstreaming climate resilience into policy and implementation frameworks

To unlock greater private investment in sustainable development across Africa, businesses must play a proactive role in shaping enabling policy, legal, and regulatory frameworks by identifying investment barriers and opportunities, as well as by partnering with governments, IFCs, DFIs, and MDBs to reduce risk and enhance project bankability. This includes leveraging concessional finance, insurance, guarantees, and other de-risking instruments to crowd in private capital particularly for early-stage or low-return adaptation projects in vulnerable areas.

Governments, in turn, must create investor certainty through clear, costed climate strategies with measurable targets and develop sector-specific policies that mainstream climate resilience and environmental sustainability. These frameworks should align with NDCs, eliminate regulatory bottlenecks, embed ESG standards, and integrate incentives that encourage private participation. Stronger collaboration between stakeholders, enhanced institutional capacity, and targeted human capital development are also essential to ensure effective policy implementation, mobilise finance, and support environmentally sustainable economic transitions through well-structured PPPs.



5.2.2 Reinforce project preparation capabilities and investors' visibility of viable project pipelines

African countries need to address constraints such as poor project preparation, unclear priorities, and limited technical and financial capacity in order to attract greater private investment in sustainable development. Businesses can support and benefit from the establishment of independent project preparation facilities that enhance the bankability of adaptation and mitigation projects through improved planning, coordination, and execution. Developing transparent, prioritised pipelines of finance-ready projects aligned with national development plans, sustainable finance taxonomies, and NDCs will improve investor confidence, reduce perceived risks, and facilitate blended finance approaches. Enhanced visibility of viable project pipeline opportunities will help align private sector action with government priorities and accelerate funding for sustainable infrastructure.



5.2.3 Mobilise increased public and private concessionary capital through innovative sustainable financing mechanisms to help close funding gaps, free up fiscal space, and implement NDCs

To close climate funding gaps and strengthen Africa's structural resilience, businesses should collaborate with governments, IFCs, DFIs, and MDBs to mobilise blended and concessionary finance through innovative sustainable finance mechanisms tailored to national contexts. By lowering perceived risks and improving project readiness, these mechanisms can attract private capital, reduce borrowing costs, and free up public funds for critical adaptation and mitigation investments. Aligning financial strategies with sector-specific needs while ring-fencing resources for socially beneficial, lower-return projects can promote inclusive, low-carbon development and support the effective implementation of NDCs.



5.2.4 Take advantage of and deploy the sustainable financing mechanisms despite recent emerging geopolitical dislocations from combating global climate change

Amid the potential weakening in international climate cooperation and reduced foreign support, businesses should proactively leverage and deploy sustainable financing mechanisms to safeguard their operations from intensifying climate risks and ensure continued investment in resilient, low-carbon growth. With support from MDBs, DFIs, IFCs, and climate finance institutions, firms can mobilise capital for commercially viable climate projects, helping mitigate regulatory and physical climate risks. Geopolitical shifts may also open opportunities for green industrialisation in Africa, making it an attractive destination for sustainable business investment.



5.2.5 Establish or expand functional national and regional carbon credit markets, while ensuring alignment with Article 6.4 of the Paris Agreement

Businesses should support the development and expansion of credible carbon credit markets in Africa, aligned with Article 6.4 of the Paris Agreement, to mobilise capital for climate adaptation and mitigation projects and to generate new revenue streams from verified emissions reductions. Effective carbon markets require strong regulatory frameworks, robust monitoring and verification systems, institutional capacity building, and regional alignment with initiatives like ACMI. These markets can enhance private investment, support socio-economic development, and enable governments to ring-fence revenues for climate resilience projects, particularly in vulnerable communities.



5.2.6 Leverage IFCs to streamline the deployment of sustainable finance mechanisms into bankable opportunities

Private firms need to collaborate with IFCs to accelerate the flow of sustainable finance into bankable projects by leveraging these centres' financial infrastructure, expertise, and partnerships to mobilise and streamline the flow of capital and knowledge towards sustainable business opportunities in Africa and beyond. IFCs connect investors with bankable projects and can develop and distribute innovative financial products, foster capacity building in ESG integration, advocate for supportive policies, enhance data and reporting standards, and serve as trusted intermediaries for PPPs. By engaging with multilateral climate funds and aligning with global standards, IFCs can position themselves as key hubs for mobilising green investment across Africa into well-structured projects.



5.2.7 Promote the role of the diaspora and remittances to support sustainable development

Commercial enterprises can support efforts to channel diaspora contributions and remittance flows towards environmentally sustainable development, including climate adaptation and mitigation. This can be achieved by implementing incentives and policies that encourage the use of remittances for green initiatives, investing in financial infrastructure to reduce transaction costs, and leveraging data to better understand remittance impacts. Additionally, attracting skilled diaspora professionals back to contribute to low-carbon and climate-resilient sectors can enhance capacity and innovation in support of sustainable growth.



5.2.8 Create platforms to match skills demand and supply with sustainable business prospects

Businesses should support the development of centralised skills-matching platforms that align workforce capabilities with the demands of low-carbon and environmentally sustainable industries. By listing required skills, companies can help guide training programmes and foster partnerships with education providers, while also improving the visibility and viability of green investments. These platforms can also serve as hubs for collaboration and knowledge sharing across governments, IFCs, and international organisations to strengthen regional coordination on sustainable development.



5.2.9 Address data shortcomings and reinforce disaster risk reduction and management systems

Businesses need to invest in closing data gaps and enhancing disaster risk reduction and management systems to better anticipate, prepare for, and respond to climate-related shocks. Reliable, timely, and disaggregated data particularly on climate risks, socio-economic vulnerabilities, and environmental conditions are essential to inform evidence-based decision-making and effective risk management. Strengthening early warning systems, integrating risk-informed planning into business operations, and collaborating with governments, IFCs, and development partners will help reduce losses, safeguard investments, and build long-term resilience in the face of increasing climate hazards.



5.2.10 Conduct ongoing capacity building, awareness creation, and technology transfer to ensure effective climate action

Ultimately, businesses should support continuous capacity building, awareness creation, and technology transfer across institutions and communities to ensure the effective implementation of these recommendations. This includes investing in education, vocational training, and skills development programmes to improve understanding of sustainable finance, climate change, and inclusive development. Strengthening technical capabilities and knowledge-sharing platforms will enable stakeholders ranging from policymakers to private firms and civil society to access, apply, and scale climate-smart solutions. Partnerships with African institutions, IFCs, and multilateral climate funds should be leveraged to mobilise financial and technical resources, while fostering inter-regional collaboration, policy coherence, and resilience to climatic shocks.

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CONCLUSION

CONCLUSION

Africa faces unique and urgent challenges in its pursuit of environmentally sustainable development and inclusive economic growth. Despite contributing minimally to global GHG emissions, the continent is disproportionately vulnerable to climate change impacts, such as extreme weather events, droughts, flooding, and infrastructure degradation. These challenges are compounded by multidimensional poverty, structural underdevelopment, limited fiscal space, high debt burdens, and constrained access to affordable international capital all of which hinder African countries' ability to finance and implement climate adaptation and mitigation at the scale required. Moreover, these development drawbacks are being exacerbated by escalating geopolitical disruptions, through which conflicts, trade uncertainty, and multilateral dislocations linked to global climate action further undermine Africa's prospects for environmentally sustainable and inclusive development.

Notwithstanding these obstacles, the continent is at a pivotal moment in its development trajectory, where climate finance presents a significant opportunity for sustainable transformation. Africa's climate finance needs are vast, estimated at around US\$ 190bn annually to meet the collective NDCs of its member states. Still, at just US\$ 52.1bn in 2022 or 3.3% of global climate finance, actual inflows remain critically low.

Public sector institutions - primarily multilateral DFIs - currently dominate climate-related financing, while private sector contributions remain limited. A combination of high perceived risks, policy and regulatory barriers, weak investment frameworks, insufficient incentives, limited institutional and human resources capacities, poor project preparation, and a shortage of bankable projects continues to deter private investment in Africa's environmental sustainability. Bridging Africa's investment gap is not only essential for systemic climate resilience but also for unlocking its economic potential and fostering long-term sustainable growth.

Africa holds tremendous opportunities to transform its economies through climate-aligned investment. Priority sectors include renewable energy systems and complementary technologies, where abundant solar, wind, and hydropower resources remain underutilised; sustainable agriculture, which can improve food security and livelihoods; and climate-resilient infrastructure, vital for protecting vulnerable populations and sustaining long-term development. Moreover, Africa's critical mineral reserves position the continent as an indispensable player in the global green transition, while the blue economy offers untapped potential in marine resources and coastal development. Each of these sectors presents avenues for investment, job creation, and emissions reduction, while also delivering social and economic dividends. This underscores the urgency of scaling public and private concessional sustainable finance inflows and innovating beyond traditional funding instruments.

Innovative financing mechanisms - such as blended finance, sustainability bonds, DFN swaps, green equity, impact investing, carbon credit markets, ILS, microfinance, and microinsurance products - can play a transformative part in mobilising capital amid widening fiscal gaps and sovereign debt burdens. These tools must be accompanied by enabling policy frameworks, enhanced technical capacity, PPPs, and increased concessional finance to de-risk investments and attract domestic and foreign capital. Additionally, IFCs can serve as key platforms for mobilising, catalysing, and channelling sustainable finance into Africa's priority sectors for environmentally sustainable and socially inclusive development.

Sustainable finance, aligned with ESG principles, provides a pathway to catalyse private and public investments that promote low-carbon, climate-resilient, and inclusive development. Realising this vision requires strengthened partnerships, pragmatic policy actions, and long-term commitment from all stakeholders. With coordinated efforts and innovative financing, Africa can overcome its climate challenges and emerge as a global leader in sustainable development.

This study offers the following interrelated recommendations to mobilise capital for Africa's environmentally sustainable development and to support the private sector in taking advantage of the related business opportunities:

- 1.** Support enabling environments for increased private investment, collaboration, and PPPs, including by mainstreaming climate resilience into policy and implementation frameworks.
- 2.** Reinforce project preparation capabilities and investors' visibility of viable project pipelines.
- 3.** Mobilise increased public and private concessionary capital through innovative sustainable financing mechanisms to help close funding gaps, free up fiscal space, and implement NDCs.
- 4.** Take advantage of and deploy the sustainable financing mechanisms despite recent emerging geopolitical dislocations from combating global climate change.
- 5.** Establish or expand functional national and regional carbon credit markets, while ensuring alignment with Article 6.4 of the Paris Agreement.
- 6.** Leverage IFCs to streamline the deployment of sustainable finance mechanisms into bankable opportunities.
- 7.** Promote the role of the diaspora and remittances to support sustainable development.
- 8.** Create platforms to match skills demand and supply with sustainable business prospects.
- 9.** Address data shortcomings and reinforce disaster risk reduction and management systems.
- 10.** Conduct ongoing capacity building, awareness creation, and technology transfer to ensure effective climate action.

Ultimately, this report calls for sustained commitment and multi-stakeholder collaboration to unlock Africa's green potential. Aligning financial flows with sustainable development objectives is not only imperative for the continent's future but is also a strategic investment in global climate stability. By enabling businesses, governments, and investors to act collectively, Africa can chart a path towards inclusive, climate-resilient, and low-carbon economic transformation.

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In line with its commitment to sustainability, CFC actively promotes responsible investment practices across Africa. From issuing a green bond to engaging in international networks such as the UNDP's Financial Centres for Sustainability and the WAIFC, CFC contributes to global discussions while leading local initiatives, including a regional roadmap for sustainable finance and early work on a voluntary carbon market.

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