African Economic Outlook 2022

HIGHLIGHTS

Supporting Climate Resilience and a Just Energy Transition in Africa

GROUPE DE LA BANQUE AFRICAINE DE DÉVELOPPEMENT
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FOREWORD

The release of the *2022 African Economic Outlook* comes against a backdrop of two major global crises: the lingering COVID-19 pandemic and the Russia–Ukraine conflict. The latter erupted as Africa's economy was on a path of recovery from the ravaging impact of the pandemic, and it threatens to set back the continent's promising economic prospects.

The continent risks sliding into stagflation—a combination of slow growth and high inflation. Real GDP is projected to grow by 4.1 percent in 2022, markedly lower than the near 7 percent in 2021. The deceleration in growth highlights the severity of the impact of the Russia–Ukraine conflict on Africa's economy. This growth will be driven largely by private consumption and investment on the demand side and by continued expansion in the services sector on the supply side. The services sector, especially tourism, has shown strong postpandemic recovery and is likely to remain buoyant in the medium term, supported by industry, especially in mining, underpinned by soaring metal prices. Africa's low COVID-19 vaccination rollout, persistent sovereign debt vulnerabilities, high debt levels, and climate and environmental concerns remain the main threats to medium- and long-term growth trajectories.

Disruptions to global trade and supply chains—primarily in agricultural, fertilizer, and energy sectors—following the Russia–Ukraine conflict and the corresponding sanctions on trade with Russia have tilted the balance of risks to Africa's economic outlook to the downside. The impact is, however, likely to be asymmetrical. On the one hand, net oil- and other commodity-exporting African countries could benefit from higher prices of their exported commodities. On the other, the impacts on net energy-, food-, and other commodity-importing countries, are concerning as higher food and energy prices will exacerbate inflationary pressures and constrain economic activity. Vulnerable populations, especially in urban areas, will bear the greatest burden of rising food and energy prices, and in the absence of measures to cushion the impact, this could stoke social tension across the continent.

An urgent countercyclical policy response such as subsidies to mitigate the impact of higher food and energy costs is therefore needed. But in many African countries, fiscal space remains constrained by the effects of the pandemic. Revenues have not recovered to prepandemic levels, and spending pressure remains elevated. The Bank has thus swiftly responded with a $1.5 billion African Food Crisis Response and Emergency Facility to rapidly ramp up food production and fertilizer supply and alleviate social sector financing constraints in Regional Member Countries. This measure will help address food security–related challenges caused by the Russia–Ukraine conflict and ensure food and nutrition security in the short to medium term.

If the conflict persists, Africa's growth is likely to stagnate at around 4 percent in 2023. Strikingly, oil-importing countries will gain the most in 2023, with growth increasing from 3.7 percent in 2022 to 4.1 percent, underscoring the resilience and diversified sources of growth in these economies. But their expansion will be mitigated by the projected slight growth deceleration in net oil-exporting countries, from 4.4 percent in 2022 to 4.1 percent in 2023.

In these economies, the supply response to the positive price shock will remain subdued due to persistently weak production capacity in some countries.

By focusing on climate resilience and a just energy transition, the *2022 African Economic Outlook* rekindles the Bank's strong commitment to addressing the continent's climate vulnerabilities and transitioning toward net-zero by 2050. The transition is inevitable but should not compromise the need for universal access to energy services and the achievement of the Sustainable Development Goals. As outlined in the report, Africa is the least climate-resilient region in the world, with high vulnerability to climate change and low readiness for adaptation to climatic shocks. Yet it has some of the lowest per capita climate finance inflows in the world. This is at odds with the tenets of true climate justice, which suggests that Africa is owed almost 10 times the global climate finance it received from 2016 to 2019.

The report thus lays out arguments for sustainable development and fairness for a just global energy system and examines low-carbon transition pathways and new opportunities for Africa's sustainable growth anchored on its resource endowment. It calls for candid discussions on the current lopsided global climate finance architecture, outlines ways for reforms, and maps existing sources of climate finance targeting the continent's needs and gaps. It further examines innovative climate finance instruments to build resilience and a just energy transition at the international, regional, and national levels for the benefit of the continent.

The good news, though, is that things are moving in the right direction. During the 26th United Nations Climate Change Conference of the Parties (COP26) in Glasgow in November 2021, representatives from nearly 200 countries agreed on further actions to curb carbon emissions and additional funding—especially for adaptation—for low- and middle-income countries. But given the scale of resources needed to meet Africa's Nationally Determined Contribution targets—estimated at $118.2–$145.5 billion a year until 2030, more concrete policy actions will be required to close Africa's annual climate finance gap. The upcoming COP27 in Sharm El-Sheik, Egypt, offers an opportunity for African leaders and stakeholders to reinforce the call for a renewed global commitment by advocating for greater and firm support to build climate resilience and ensure a just energy transition on the continent, leaving no one behind.

In view of the low climate finance resource flows to the continent, this year's *African Economic Outlook* also offers innovative perspectives on how African countries can successfully navigate the ongoing socioeconomic challenges and rising geopolitical conflicts to avoid a triple crisis of sluggish economic recovery, increased energy deficits and inequality, and high climate vulnerabilities. Although global partnerships will be crucial to addressing these challenges, African countries need to do more advocacy work and combat COVID-19 vaccine hesitancy. The report also highlights the importance of supporting domestic pharmaceutical industries and promoting industrialization, which will drive long-term economic growth and sustainable development. Countries also need to take bold steps to strengthen public financial management, including of climate finance resources; reform fossil fuel subsidies; promote transparency and accountability in debt contraction; improve public service delivery; develop well-tailored domestic resource mobilization instruments; improve tax administration; and create an environment to mitigate private investment risks for sustained long-term growth and employment creation.

With bilateral and multilateral development partners, the private sector, and African governments working together, the continent will emerge stronger from the socioeconomic disruptions brought about by the triple effects of the COVID-19 pandemic, the Russia–Ukraine conflict, and climate change.

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HIGHLIGHTS

CHAPTER 1
AFRICA'S ECONOMIC PERFORMANCE AND OUTLOOK

Real gross domestic product (GDP) in Africa rebounded strongly in 2021, growing by 6.9 percent. This rebound was supported by recovery in global demand, higher oil prices benefiting oil-exporting economies, easing of COVID-19 restrictions in most countries, and associated growth in domestic consumption and investment. Africa's real GDP growth is, however, projected to decelerate to 4.1 percent in 2022, reflecting ebbing of base effects and uncertainties related to the persistence of the COVID-19 pandemic and the impact of the Russia–Ukraine conflict.

Growth varies widely across countries and regions. Economic growth in 2021 was highest in North Africa (11.7 percent) and East Africa (4.8 percent). In 2022, growth is expected to decelerate to 4.5 percent in North Africa and to stabilize at 4.7 percent in East Africa. Average growth in 2021 in West Africa was 4.3 percent and is projected to remain strong at 4.1 percent in 2022. Growth in Central Africa is projected to rise to 4.6 percent in 2022, from 3.4 percent in 2021. Southern Africa's estimated growth of 4.2 percent represented the largest recovery, from a contraction of 6.0 percent, underpinned by strong recovery in Botswana (12.5 percent), Mauritius (4.0 percent), and South Africa (4.9 percent). Growth in the region is projected to decelerate to 2.5 percent in 2022 as the effects of large fiscal stimuli peter out.

Africa's growth outlook is highly uncertain, with risks tilting to the downside. The spillover effects from the Russia–Ukraine conflict and related sanctions on Russia may cause a larger decline in global output than currently projected. A combination of low COVID-19 vaccination rollout and emergence of new COVID-19 variants may force countries to retain some restrictions. Other downside factors include heightened debt vulnerabilities, tight global financial conditions as inflationary pressures rise, the effect of the Russia–Ukraine conflict and related sanctions on Russia, climate and environmental risks, and other sociopolitical and security issues. Upside factors include faster vaccination rollout, a comprehensive resolution of debt problems, and policies to accelerate structural transformation and build economic resilience.

Macroeconomic fundamentals have generally improved, but considerable challenges remain in the medium term, due largely to persistence of the pandemic effects and volatility induced by the impact of the Russia–Ukraine conflict. The average fiscal deficit in Africa is projected to narrow to 4.0 percent of GDP in 2022, from 5.1 percent in 2021, reflecting scaling-down of COVID-19-related interventions and relative strengthening of domestic

revenues. However, rising commodity prices triggered by the Russia–Ukraine conflict represent a major headwind for the fiscal situation in the short to medium term, especially for economies dependent on imports of energy and food commodities. The average current account deficit is projected to be 2.0 percent of GDP in 2022, down from 2.4 percent in 2021, underpinned by expected narrowing of the trade deficit and current transfers. Exchange rate fluctuations fell in most countries in 2021, supported by improved foreign exchange inflows. The outlook for exchange rates in 2022 and beyond depends on developments in international financial markets, especially on the back of the Russia–Ukraine conflict and normalization of monetary policy in advanced economies. Average inflation is projected to accelerate to 13.5 percent in 2022 from 13.0 percent in 2021, fueled by a sharp rise in commodity prices, especially energy and food, due to escalation of the Russia–Ukraine conflict.

Improving vaccination rates by tackling vaccine hesitancy and improving vaccine supply is key to reducing infections and mortality and to quickening the economic recovery

Sovereign debt remains a threat to economic recovery despite recent debt relief initiatives. Although Africa's debt-to-GDP ratio is estimated to stabilize around 70 percent in 2021 and 2022, from 71.4 percent in 2020, thanks to growth recovery and debt relief measures, it will remain above pre-pandemic levels. The international financial community's initiatives, such as the Debt Service Suspension Initiative (DSSI), the Common Framework, and the International Monetary Fund's August 23rd, 2021, general allocation of $650 billion-equivalent Special Drawing Rights (SDRs) have also helped alleviate liquidity pressures in many countries by boosting external buffers. However, these initiatives have not erased debt vulnerabilities, with 23 African countries either in or at risk of debt distress as of February 2022. Additional structural reforms such as debt restructuring and reprioritizing public spending are required to ensure long-term debt sustainability. Reconfiguring the global debt relief architecture, including reinstating the DSSI, will be crucial in supporting debt-ridden African countries' transition toward a path of sustainable debt in the medium to long term.

Despite a rebound in growth, the impacts of the COVID-19 pandemic on lives and livelihoods in Africa continued in 2021. The Bank estimates that about 30 million Africans were pushed into extreme poverty in 2021 and that about 22 million jobs were lost in African countries the same year due to the pandemic. These outcomes are likely to continue in 2022 and 2023. When the prolonged effect of economic disruptions stemming from the Russia–Ukraine conflict is accounted for, the number of additional Africans who could be pushed into extreme poverty is estimated to be 1.8 million in 2022 and 2.1 million in 2023. Workers in the informal sector, mainly women and youth, are the hardest hit. In addition, several African countries, such as eSwatini, South Sudan, and Uganda, closed schools for more than 36.7 weeks (the global average from the onset of the pandemic to October 2021)—equivalent to more than a half-year of schooling—eroding the positive trends in education over the past decade. Additional financing needs are estimated at about $432 billion over 2020–22 (a revision from the previously estimated $484 billion due in part to better-than-anticipated fiscal positions) and translated into an average of $144 billion a year over this period to support the recovery.

Africa's low vaccination rates are constraining faster economic recovery and increasing the health impact of COVID-19. These rates—15.3 percent of people were fully vaccinated by end-March 2022 against a target of at least 60 percent in most other global regions—are attributed to a combination of supply- and demand-side impediments. Improving vaccination rates by tackling vaccine hesitancy and improving vaccine supply is key to reducing infections and mortality and to quickening the economic recovery. African countries will thus need to speed up their current vaccination rollout if they are to close the vaccination gap with other regions.

Africa is the region most affected by climate shocks: 5 of the 10 most affected countries in 2019 are on the continent. In just 2020 and 2021, 131 extreme-weather, climate change–related disasters were recorded on the continent—99 floods, 16 storms, 14 droughts, and 2 wildfires. Climate change, therefore, poses substantial risks to African economies, threatens the lives and livelihoods of millions of people,

and could undo hard-won progress in achieving some of the key targets of the Sustainable Development Goals (SDGs), the African Union Agenda 2063, and the Bank's High-5s. Policies to support post-pandemic economic recovery for Africa must include initiatives to enhance the resilience of the continent by mitigating climate-related shocks that contribute to output fluctuations and poverty.

Policy recommendations to build back better and engender resilient economies in Africa

- *Speed up COVID-19 vaccination rollout through better vaccine delivery policies and strong support to domestic pharmaceutical industries.* Keeping the pandemic under control should remain a top policy priority for African countries. Increasing vaccination rates would reduce infections and protect against the emergence of more transmissible and deadly variants of the virus. In addition, better vaccination coverage will ensure that scarce public financial resources are channeled directly to post-COVID-19 recovery efforts and help build economic resilience against future shocks.
- *Increase investments in critical healthcare systems.* Governments should invest more in their healthcare systems and increase the number of critical healthcare workers to deal with recurrent health shocks by considerably increasing the budgetary allocation to the sector. Prioritizing the sector will entail investing in new healthcare facilities—or rehabilitating and upgrading existing ones—with state-of-the-art infrastructure and equipment; training health professionals in medical advances in managing and responding to pandemics and epidemics; and establishing clear preparedness plans against future resurgence of health shocks.
- *Promote inclusive growth to address increased poverty and inequality through social programs and job opportunities targeting vulnerable people.* Countries should undertake tailored social programs that reach the most vulnerable, such as women, young people, disabled people, informal workers, and female-headed households. These efforts will also require countries to implement reforms that support industrialization, diversification, and digitization; improve labor market regulations and make labor markets more adaptable and responsive to shocks; improve the management and efficiency of public tax systems; encourage private sector productivity-enhancing innovations; and match the curricula of education systems to the needs of labor markets.
- *Coordinate monetary and fiscal policy actions to bolster recovery.* In countries where inflation is contained, accommodative monetary policies need to be maintained and strengthened to help preserve favorable financing conditions and accelerate the post-COVID-19 recovery. However, in countries where inflationary pressures are elevated—due mainly to supply–demand mismatches exacerbated by the Russia–Ukraine conflict—timely monetary policy tightening will be needed even if that delays recovery. A tighter monetary policy that targets inflation should be complemented with a carefully calibrated fiscal policy response to support the recovery and protect the most vulnerable people. Supporting the most vulnerable will require reprioritizing spending and better targeting social safety nets. Net oil exporters could use the fiscal windfall created by higher oil prices to build fiscal buffers and support recovery and the most vulnerable. Where recovery is weak, countries could use their extra fiscal space wisely by prioritizing targeted social spending and productive investment to build the foundation for faster future growth. However, for many countries, navigating this complex path will require decisive support from the international community and global cooperation to prevent humanitarian and debt crises.
- *Reduce dependence on any single supplier of food.* One lesson from the Russia–Ukraine conflict is that countries should diversify sources of imports of crucial goods and commodities such as energy and food to build resilience against idiosyncratic shocks. The long-run policy response to economic diversification should include enhancing intra-Africa trade to build food self-sufficiency. This will be crucial to building economic resilience to future shocks. The African Continental Free Trade Area offers substantial opportunities for trade diversification

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and development of trade networks in key agricultural commodity markets and in less volatile manufacturing value added products.

- *Reinstate and reconfigure the DSSI and Common Framework and scale up efforts to accelerate governance reforms and strengthen public financial management to deal with the structural challenges of Africa's rising public debt.* High public debt threatens recovery efforts on the continent and is holding back prospects to engender high and sustainable economic growth. Domestic policy response remains constrained by limited fiscal space amid growing social sector spending pressures. It is therefore imperative that the global community rethink terminating the DSSI framework, which was designed to provide temporary relief to countries facing growing debt overhang. A reconfigured DSSI and Common Framework will limit the impact on Africa's public debt from currency depreciation due to the global uncertainty stoked by the Russia–Ukraine conflict and spillover effects of the tight monetary policy stance being implemented in advanced economies. African countries need to accelerate governance reforms and improve public financial management if they are to decisively address their recurrent debt vulnerabilities. These actions require them to build strong budget institutions so as to efficiently mobilize domestic resources, conduct sound public expenditure, and implement rigorous debt management and budgeting.
- *Boost local cereal production in Africa to mitigate global supply risks.* Supporting Africa's small-scale farmers can trigger an agriculture revolution to feed Africa, especially in urban areas. It is imperative that African countries provide farmers ample access to affordable finance, improved food production technologies (especially certified seeds adapted to extreme climatic conditions), large-scale systematic extension, and mechanization services, to boost food production. Moreover, food prices can be stabilized in the short term through targeted release and replenishment of strategic food reserves. Such interventions often work best if they bring together the private sector, international community, national and international research centers, and governments.

Africa's share of cumulative carbon emissions between 1850 and 2020 was below 3 percent, much of which is locked in forestry and land use

CHAPTER 2 CLIMATE RESILIENCE AND A JUST ENERGY TRANSITION IN AFRICA

The Paris Agreement, which came into force in November 2016, highlighted the need to hold the increase in the global average temperature to well below 2°C above preindustrial levels and to pursue efforts to limit the temperature increase to 1.5°C above those levels. The agreement called for "common but differentiated responsibilities" to support mitigation of greenhouse gas emissions alongside climate adaptation.

Climate justice is not only about how the world should transition from carbon-intensive development to climate-resilient pathways, but also how the burden of historical and current carbon emissions should be shouldered by countries in a responsible manner. If the world is to achieve the net-zero transitions by 2050, as stipulated in the Paris Agreement, then it means that about 85 percent of the "global carbon budget" has already been used, with only 400 gigatonnes of carbon dioxide equivalent ($GtCO_2eq$) left. A large proportion of historical and current emissions are from developed and emerging economies: the United States, the 27 countries of the European Union, the United Kingdom, and China accounted for about 70 percent of cumulative carbon emissions between 1850 and 2020. Africa's share was below 3 percent, much of which is attributed to forestry and land use.

In 2020, the average American had a carbon footprint of 14 tonnes CO_2eq (tCO_2eq), the average African 0.95 tCO_2eq, much below the required global per capita average of 2.0 tCO_2eq needed to achieve the Paris Agreement. Securing socioeconomic development within the remaining global carbon budget and supporting climate adaptation are the key components of "climate-resilient development," which is "a development trajectory that strengthens sustainable development at multiple scales, while reducing the threat of climate change through ambitious mitigation, adaptation and climate resilience."

The burden of climate change on African economies and livelihoods is disproportionately

high, despite the continent's low share of global carbon emissions. The Intergovernmental Panel on Climate Change Working Group 1 projected that the rate of temperature increase across Africa will exceed the global average and will be accompanied by increases in frequency and intensity of heavy rainfall events almost everywhere in Africa. The projected dry and hot conditions will have a severe impact on the continent where most people's livelihoods are directly linked to the health of natural systems, and in many cases dependent on rainfed agriculture. African countries are already spending substantial resources annually to cope with the effects of the climate crisis, diverting scarce resources from investment in socioeconomic development programs, and threatening to drive countries into ever deeper poverty.

The principle of a just energy transition must consider past emissions and how they shape future emissions trajectories. Africa contributed little to the historical emissions buildup and should not be denied the carbon space to develop its economy.

Africa is the least climate-resilient global region, with high vulnerability and low readiness to climate change. Its vulnerabilities are largely caused by its desert and semidesert climatic zones, low levels of socioeconomic development, and lack of technological capacity and finance for adaptation. Many countries on the continent have a huge deficit in climate finance and investment to adopt preparedness and response measures for climate change. Developing climate adaptation measures, identifying and assessing disaster risks, and strengthening collaboration and coordination across African subregions and countries are all urgently needed.

Climate shocks threaten to derail development gains and cause further economic costs and social disruption. Adapting to climate change could cost the continent at least $50 billion annually by 2050. Across East and West Africa, climate change in the high-warming scenario is estimated to reduce GDP per capita growth by up to 15 percent by 2050, below the baseline GDP per capita growth scenario. North and Southern Africa would also be severely affected, with around a 10 percent decrease in GDP per capita growth by 2050, and Central Africa would face a potential decrease in GDP per capita growth of around 5 percent. These regional differences are partly explained by variations in economic structures and by the degree of climate resilience.

Inclusive and resilient development requires countries to triangulate the economic, social, and environmental dimensions of sustainable development in an integrated way. A "silo" approach that focuses on one dimension at the expense of the others has a less optimal impact. One of the main ways to address the integration of these three sustainable development dimensions lies in the concept of "climate-resilient development pathways," which calls for an integrated assessment of adaptation and mitigation. The concept implies that such development pathways mitigate climate risks, protect countries and communities against losses and damages from climate events, boost economic growth, create quality jobs for citizens, and improve livelihoods and social well-being of all citizens concurrently. Economic development pathways that allow for equal consideration of the three dimensions will be able to deliver sustainable and inclusive progress for current and future generations.

Africa needs to accelerate its structural transformation to achieve social and economic progress within the global carbon budget constraint and against a backdrop of a rapidly changing climate. The continent has experienced strong economic growth since 2000 relative to the 1990s, which has led to the optimistic narrative that "Africa is rising." However, growth was largely driven by commodity prices, albeit supported by improved macroeconomic management and debt relief, but with little structural transformation and persistent poverty and inequalities. Population growth and urbanization rates in Africa place huge needs for scaling up investments in infrastructure in key sectors (including agriculture, energy, roads, rail, airports, seaports, and industry), public services, job creation, and environmental sustainability. The type of infrastructure development to meet the social and economic needs of citizens

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determines the trajectories of countries' sustainable development pathways. Hence, infrastructure investments must decouple the delivery of social and economic welfare gains from environmental externalities such as carbon emissions.

Universal access to energy services is crucial for achieving the SDGs, including poverty eradication (SDG1) and climate resilience (SDG13). Economic development, climate change, and energy policy are inextricably linked. As countries grow through industrialization, their demand for energy increases. SDG7 on universal access to energy calls for "access to affordable, reliable, sustainable and modern energy for all." It recognizes that none of the other SDGs can be achieved without adequate access to energy services. Further, access to sustainable energy services is a key enabler of economic growth, poverty eradication, gender inclusion, and climate resilience.

African economies should have headroom on greenhouse gas emissions, low levels of economic growth, and significant untapped resource potential

Power consumption per capita in Sub-Saharan Africa is the lowest in the world, estimated at 370 kilowatt-hours (kWh) a year, far lower than the 6,500 kWh in Europe and 11,000 kWh in the United States. Over 600 million Africans have no access to electricity, despite progress in recent years. Access to, and reliability and affordability of, energy services remain major constraints to economic growth, competitiveness, and job creation in many African countries. With the current trends in Africa's demography, urbanization, and economic development, Africa needs to boost its modern electricity production and consumption hugely to achieve the SDGs, including poverty eradication and climate resilience.

Industrialization is key to long-term economic growth and sustainable development. During the early stages of industrialization, increasing economic productivity is often the priority objective. The multiplier effects of increased economic activity lead to social progress through, for example, job creation, higher manufacturing value added, greater tax revenue from produced capital, and stronger GDP growth. However, overreliance on cheap fossil fuels to drive industrialization and export-led growth comes with social, economic, and environmental externalities. These include widening income gaps and social fragilities, systematic liquidation of natural capital (forests, freshwater, and other natural resources), and degradation of ecosystem services.

Balancing the key components of sustainable development is imperative. Efforts must lead to a gradual decoupling of economic activities and outcomes from environmental harm through the technical efficiency that comes with cleaner technologies and higher marginal value products in firms. While fossil-driven pathways have facilitated growth and prosperity in the past, this pathway to industrialization is closing. The fast pace of renewable energy (RE) technologies and market transition, with global policy commitments to net-zero development pathways, present significant risks for fossil-based energy investments in the medium and long term. As global investments in RE technologies increase, technical breakthroughs and innovative solutions are inevitable. Market responses in the form of lower prices and increased demand for RE will crowd out demand for fossil-based energy sources, as already seen in key sectors such as lighting, transport, and some other energy services. Continued investment in fossil-based energy sources will face stiff market competition today and could lead to stranded assets tomorrow. The development finance architecture is also rapidly changing, with a significant bias toward RE technologies.

There are trade-offs in choosing energy system transition pathways to support economic development objectives while remaining within the global carbon budget. Given their historical and current contributions to global carbon emissions, African economies should have headroom on greenhouse gas emissions, low levels of economic growth, and significant untapped resource potential. Distributive justice—a just energy transition in Africa—requires that more of the remaining global carbon budget is allocated to the African continent to allow it to meet the basic needs of its citizens as well as achieve other SDGs. However, policymakers should also recognize that a "grow first, clean up later" approach comes with major environmental and social costs for current

and future generations. The social, economic, and environmental costs in the medium and long term often outweigh current benefits. Equally, deep and widespread poverty contradicts the very essence of sustainable development: poverty engenders environmental degradation and vice versa. Energy policies should therefore factor in the medium- and long-term social, economic, and environmental costs and benefits in developing sustainable energy systems.

Although fossil-based energy sources, including coal, remain a significant part of the energy mix in most countries, the share in Africa's energy mix is relatively modest. Given the lifespan of these fossil-based energy systems, they will remain major sources in the mix up to 2050 and beyond. Thus, weaning economies off the lock-in to fossil-based energy systems would transition the world faster to a net-zero economy. However, as seen in historical evidence, the transition involves high investment costs and a long time. It took North America, Europe, and China 35 years to reduce coal in their energy mix by 60 percent, 54 percent, and 2 percent, respectively (between 1985 and 2020). In contrast, India increased the share of coal in its energy mix by 16 percent in this period. Africa reduced the share of coal in its energy mix to 29 percent from 54 percent in the period.

Natural gas has served as the transition fuel in countries that have access to it, allowing them to gradually reduce coal in their energy mix. For instance, the share of natural gas in the energy mix in North America, Europe, China, and Africa grew by 217 percent, 150 percent, 300 percent, and 255 percent, respectively, between 1985 and 2020. Other complements in the energy mix include nuclear, hydropower, and other RE technologies, such as wind, geothermal, and solar. While the proportion of RE in the mix has rapidly increased in the past 35 years, it remains a small share of the energy mix in all regions. The fastest increase was in the European Union, rising from 14 percent to 34 percent between 1990 and 2020. Africa recorded a 500 percent increase in other RE technologies during this period, but a 21 percent decline in hydropower due to the recurrence of climate change–induced droughts. Much work still needs to be done to accelerate RE technological capacity. Such capacity—to provide a sustainable and reliable baseload for industrial activities—is still being developed. Large investments are required to upgrade existing grids to accommodate a high penetration of variable RE systems in countries.

Low carbon transitions in Africa will vary from country to country. The energy issues across Africa are inherently complex, largely due to the dual nature of the energy system itself where traditional and modern energy systems and practices coexist. Further, the continent has a variety of ecological zones, climates, settlement patterns, economic structures, resource bases, and governance systems. Some countries are heavily endowed with fossil fuels and others in renewable resources or both. African countries present a wide diversity in energy potential and needs, despite considerable commonalities, and policies for a just energy transition in Africa must consider this fact. Some commonalities include the need to rapidly scale up investment in RE technology development and deployment as well as in energy-efficiency technologies, and to strengthen country capacity for participating in RE markets and innovative climate finance. These approaches will support a just energy transition in Africa to low carbon energy development. A just energy transition will also mainstream youth and gender empowerment and social equity to ensure that "no one is left behind."

Africa's low carbon transition provides transformational socioeconomic growth opportunities. Given their competitive advantage due to rich endowments in RE and in the green development of mineral resources, many African countries have a unique opportunity to benefit from low carbon development and a just energy transition pathway appropriate to their national context. The continent is richly endowed in lithium, graphite, cobalt, nickel, copper, and rare earth minerals—all of which are essential to building the global green economy of the future and which represent new market opportunities for net-zero transitions. The current development context makes the transition to low carbon development imperative. The "grow first, clean up later" principle is no longer tenable.

Many African countries have a unique opportunity to benefit from low carbon development and a just energy transition pathway appropriate to their national contex

In addition to the SDGs, Africa's Agenda 2063 among other goals aspires to build "a prosperous Africa, based on inclusive growth and sustainable development." Global development goals, development finance, and market trends also point to global demand for more inclusive, low-carbon development pathways within the global carbon budget constraint. With their limited lock-in to fossil-based energy technologies, many African countries have unique opportunities to build a needs-based climate-resilient and integrated sustainable energy sector.

Policies on climate resilience and a just energy transition in Africa should be designed as inclusive. African countries can all participate in the just energy transition by strengthening local capacity in green technology development and by moving up the global green value chain. Some of them are already major suppliers of critical minerals for renewables and electronics goods to producers, mainly outside Africa, such as China, the United States, and the European Union. The global green transition must mean more than just installing technologies that help drive global decarbonization under the current global knowledge systems that created climate change. There is a need to encourage new models of development that foster the location of clean technology industries close to the sources of raw materials to boost socioeconomic development in resource-rich countries, reduce the carbon footprint of products, and deliver global environmental co-benefits.

Countries must have the latitude to define development programs for net-zero transitions within their social, economic, and environmental contexts

Aligning the Nationally Determined Contributions (NDCs) to national strategies is critical. NDCs represent the commitments of each country to reduce greenhouse gas emissions and adapt to climate change. They embed the financing requirements (internal and external) to achieve the desired transitions. African governments need to connect their NDCs to country sectoral and social development visions, policies, regulations, and markets, enabling the NDCs to create the conditions that foster endogenous innovation and investment in green technology solutions to build local capacity for a just transition. Conditional financing is more prevalent in the African NDCs than in other global regions mainly because they were designed on the assumption that the $100 billion agreed in Cancun would support country-led strategies and be flexible to country needs. It was also assumed that financing would come in the form of grants that are flexible, but that did not happen. There is a disconnect between country strategies and the type of financing available to implement them.

African governments should mobilize their efforts to build institutions and develop human resources to create the conditions for investment and implementation of a just transition in countries. Countries that have the institutional capacity can build a healthy and viable regulatory environment to spur greater investment. They would also be able to develop local content policies and sector-specific strategies that are in line with their capabilities and aspirations tailored to their development goals. Internal capacity is important if innovation and investment promotion are to drive climate-resilient development programs. And to be sustainable, countries must have the latitude to define development programs for net-zero transitions within their social, economic, and environmental contexts.

Effective partnerships are required, based on the mutual interest of taking climate action everywhere. Climate change is a global issue—for example, greenhouse gases mix freely in the atmosphere irrespective of their origin, although the impacts could be disproportionate and localized in the short term due to differences in vulnerability and in adaptation capacity. In the medium to long term, climate impacts can have unintended consequences beyond national boundaries through increased economic, social, and environmental fragilities. Global action is therefore required in developing climate policy and mobilizing climate finance to support mitigation of further greenhouse gas emissions and adaptation to climate impacts everywhere. The cost of uncoordinated global action or inaction could lead to global catastrophe sooner than expected.

CHAPTER 3 FINANCING CLIMATE RESILIENCE AND A JUST ENERGY TRANSITION IN AFRICA: STRATEGIES AND INSTRUMENTS

Climate finance inflows to Africa have fallen short of the commitments made by developed countries and of the continent's adaptation and mitigation needs. Between about $1.3 trillion and $1.6 trillion will be needed over 2020–2030 to implement the continent's climate action commitments and NDCs, or between $118.2 billion and $145.5 billion annually. Africa's share in total global climate finance increased by only 3 percentage points on average in 2010–19, from 23 percent (or $48 billion in total) in 2010–15 to 26 percent (or $73 billion) in 2016–19. If this trend continues, a climate financing gap of $99.9 billion to $127.2 billion a year will remain through 2030, likely undermining Africa's efforts to support climate resilience and a just energy transition.

Despite energy being the most funded sector in Africa, resources mobilized so far for the sector are dwarfed by the continent's enormous energy investment needs. About $15.5 billion (26 percent of the total) of climate finance inflows to Africa was channeled annually in 2010–19 to the energy sector. However, under the Bank's New Deal on Energy for Africa, $32–$40 billion in annual investment along the energy value chain is required to achieve universal access to electricity on the continent by 2030, leaving a total annual climate financing gap for energy under the New Deal of $16.5 billion to $24.5 billion. The continent's large economies—Egypt, Nigeria, and South Africa—account for about 33 percent of the gap.

Climate finance has often been mobilized for more resilient countries and those less vulnerable to climate shocks. Climate finance did not flow significantly to countries more likely to experience climate shocks and other extreme weather events, nor to those less resilient to climate change. Though some idiosyncratic factors might explain the relative attractiveness of climate finance to some countries, such as capacity to develop bankable projects, this perverse association between climate finance and countries' resilience and vulnerability suggests a potential misallocation of resources to countries.

Debt instruments have been increasingly used to finance climate-related projects in Africa, often on nonconcessional terms. Financing instruments for climate change in Africa have so far disproportionately leaned toward debt: in 2011–19, debt instruments accounted for about two-thirds of all climate finance to African countries. Debt relief instruments represented less than 0.1 percent of climate finance over the same period. The 33 percent of debt-financed climate projects in Africa on nonconcessional terms could have increased Africa's debt burden and exacerbated debt sustainability challenges, further undermining the continent's climate resilience capacity.

The global climate finance landscape is highly fragmented, leaving accountability for climate finance flows opaque and hard to measure objectively. Climate finance is loosely defined as local, national, or transnational, drawn from public, private, or other sources of financing that seeks to support mitigation and adaptation. The climate finance landscape has so far mirrored the existing political economy of the global development finance architecture, which is largely donor dominated. Weak coordination and lack of an agreed methodology for measuring climate finance flows from different sources have led to a lack of transparency and accountability in tracking new and additional climate finance flows from different sources. This has led to increased tradeoffs among climate finance and other sources of financing for development, including Official Development Assistance (ODA) and financing from multilateral development banks (MDBs), which includes resources from African member countries.

Rebranding ODA as climate finance has significant implications for achieving the development goals for which it was designed, especially poverty eradication programs. Yet, counting MDB resources as part of the $100 billion commitment of climate finance flows from the developed to developing countries would lead

$32–$40 billion in annual investment along the energy value chain is required to achieve universal access to electricity on the continent by 2030

to double counting, as that would include capital contributions from developing-country shareholders in the regional MDBs. Greater clarity is required on the methodology of measuring climate finance flows to cover new and additional commitments so as to avoid double counting.

Several innovative climate finance instruments can be deployed to mobilize domestic climate finance in Africa. These instruments include green bonds and loans, sustainability or sustainability-linked bonds and loans, and debt-for-climate swaps. The SDRs allocated to willing developed countries could also be reallocated to African countries through the African Development Bank or the African Development Fund, or both, as prescribed holders for further leveraging and financing for climate resilience and a just energy transition in Africa. Countries can also mobilize domestic capital through carbon markets, especially when emissions are traded at the true price of carbon. Other innovative climate finance instruments could include realignment of fossil-fuel subsidies and other progressive tax instruments, deployable in key sectors such as energy and transport.

Institutional capacity development, along with regulatory and other policy reforms, are urgently needed to support and accelerate climate finance from domestic and external sources

Policy recommendations

- Based on this report's work on carbon debt and carbon credits, the total climate finance due to Africa to compensate for historical and future emissions is estimated at between $4.76 trillion (lower bound) and $4.84 trillion (upper bound) through 2050, which translates into an annual figure of between $163.4 billion and $173 billion for 2022–50. These estimates reflect Africa's carbon credit accounting for its historical and future carbon emissions share value at the current average international social cost of carbon. These amounts are very high, reflecting the opportunity costs to Africa of historical emissions by other world regions between 1850 and 2021. The scale of fiscal measures mobilized by the world in response to COVID-19 ($17 trillion) within two years indicates that the tools and resources to meet the climate finance commitments exist—if political will is mobilized.
- Developed countries should demonstrate political will to address climate change adaptation and mitigation challenges in developing countries by honoring their commitment to provide $100 billion annually to developing countries to support climate action. This should be new and additional resources, distinct from ODA commitments and financing from MDBs.
- The SDR amounts allocated to willing developed countries should be channeled to African countries through the African Development Bank or the African Development Fund, or both, for greater leveraging to support climate resilience and a just energy transition in Africa.
- Innovative financing instruments, such as green bonds and loans, sustainability or sustainability-linked bonds and loans, debt-for-climate swaps, and more efficient and better-priced carbon markets, could provide much-needed domestic resources to support Africa's ambition to achieve a net-zero transition by 2050.
- Institutional capacity development, along with regulatory and other policy reforms, are urgently needed to support and accelerate climate finance from domestic and external sources—public and private—for climate resilience and a just energy transition in Africa. Countries should take steps to strengthen public financial management; promote transparency and accountability in public service delivery; improve government effectiveness in management of climate finance; build internal capacities in climate-related program/project origination and life cycle management; develop well-tailored domestic resource mobilization instruments, including tax and subsidy reforms; and improve the business environment to mitigate investment risks in the medium to long term.
- MDBs, development finance institutions, and bilateral development agencies should make available a greater volume of concessional finance instruments and grants to support climate adaptation and a just energy transition in Africa. Climate change is a global commons problem, demanding global cooperation for sustainable resolution. Accelerating climate finance for climate resilience and a just energy transition in Africa is in the interest of the whole of humanity's future.

Africa's real GDP growth is projected to decelerate to 4.1 percent in 2022, from 6.9 percent in 2021, due largely to the adverse effects from the lingering COVID-19 pandemic and the outbreak of the Russia–Ukraine conflict. These shocks notwithstanding, private consumption and investment are projected to remain the main anchors of growth on the demand side, while the services sector is projected to drive growth on the supply side, supported by industry, especially in mining, as metal prices soar. If the pandemic and the Russia–Ukraine conflict persist, Africa's growth is projected to stabilize at around 4 percent in 2023.

A policy mix to speed up vaccine access and rollout, stabilize domestic energy and food prices, address debt vulnerabilities, and support vulnerable households and firms will be critical to boosting post-COVID-19 economic recovery and cushioning the economic impact of the Russia–Ukraine conflict.

The theme of this year's report, *Supporting Climate Resilience and a Just Energy Transition in Africa*, aims to raise awareness on the devastating effects of climate change on the continent and the urgency to identify and leverage, without further delay, innovative financing instruments to address climate vulnerabilities and transition toward net-zero by 2050.

The Bank's new research on carbon debt and credits estimates that the total climate finance needed to compensate Africa for historical and future emissions until 2050 is $4.76–$4.84 trillion—or $163.4–$173 billion a year between 2022 and 2050, almost 10 times as much as the continent received each year from 2016 to 2019. The resulting climate finance gap is unlikely to be filled by traditional financing instruments, which calls for innovative instruments and strong regional and global cooperation.

A key policy recommendation to address the climate finance gap is to leverage innovative financing instruments such as green bonds and loans, sustainability or sustainability-linked bonds and loans, debt-for-climate swaps, and more efficient and better-priced carbon markets. In addition, the global community—and developed countries in particular—should consider scaling up their climate financing commitment to more than $100 billion. The additional financing should reflect the true opportunity cost of climate change in Africa and other developing regions.

Finally, as the report outlines, African countries have a role to play. They need to create conducive business, macroeconomic, and financial environments—a vital prerequisite to mobilize and attract more climate finance. The necessary reforms should be broad-based and concern public financial management and other domestic financial systems, effective management of climate-funded projects, internal capacity building, and innovative domestic resource mobilization instruments.

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