04 CLIMATE CHANGE: TACKLING A GLOBAL CHALLENGE

ESSAY

VIEWPOINTS

GOVERNANCE CALL-OUT

From COP26 (Glasgow) to COP27 (Sharm el-Sheikh, Egypt): What to expect at Africa's COP

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Despite progress towards the shared goal of addressing climate change, COP26 did not sufficiently put the world on track to successfully tackle the problem. The outcomes especially fell short of what Africans had hoped for. On the positive side, the Glasgow Accord kept the "1.5°C warming goal alive," and countries have been asked to come to COP27, to be held in Sharm el Sheikh, Egypt, with more ambitious Nationally Determined Contribution (NDCs).[1] A new agreement on global carbon trading was achieved, adding a much-needed tool to the fight against climate change. Negotiators reached other significant agreements[2] in Glasgow, notably 65 countries committed to phasing out coal power, more than 100 countries agreed to slash methane emissions, and 130 countries—representing over 90 percent of the world's forests—pledged to end deforestation by 2030.

On the other hand, developed countries failed to reach the $100 billion annual funds promised in Paris to developing countries for climate action by 2020.[3,4] The current NDCs are estimated to reach a warming trajectory of 2.4°C—almost an entire degree above the goal. The discussion on climate "loss and damage"—what damage is caused by climate change and which parties should pay for it—made some modest progress, and the Glasgow Accord called to start a dialogue to discuss funding arrangements. Such an announcement is a major step given that many major powers had previously opposed even using the words "loss and damage" in climate-related negotiations.

The evident lack of urgency contrasts sharply with the projections from the Sixth Assessment of the Intergovernmental Panel on Climate Change (IPCC) for Africa.[5] Life-threatening temperatures above 40°C (104°F)are projected to increase by 10 to 140 days a year, depending on the scenario and region. The continent will see drier conditions in most regions, with more droughts but also more flooding. With the rise in sea level (as much as 0.9 meters by 2100 under high-warming scenarios) and more frequent flooding, a current 1-in-100 year flood event will become 1-in-10 or -20 years by 2050, and 1-in-5 years to annually by 2100, even under moderate warming. With rapidly growing cities in low-lying coastal areas in Africa, the damage to property and livelihoods more generally, exacerbated by climate change, will be compounded. In other words, under the projected warming trajectory of 2.4°C, the impacts of climate change could make many parts of Africa uninhabitable. Policy change, financial transfers, and decisive and transformational mitigation measures by the largest-emitting countries are critical. The narrative is clear and remains consistent: Africa's historical and current emissions of greenhouse gases are minimal; still, the region will suffer some of climate change's most severe consequences if not adequately addressed.

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Even if the world remains under 1.5°C warming, Africa will need to adapt to the new reality of a rapidly changing climate. Thankfully, COP26 did result in some positive steps regarding climate adaptation. The developed world recognized the need to increase funding for adaptation support: The Glasgow Accord "urges developed country Parties to at least double their collective provision of climate finance for adaptation to developing

1 "The Glasgow Climate Pact—Key Outcomes from COP26." United Nations Framework Convention on Climate Change, 2021.
2 COP26: Together for our planet | United Nations
3 OECD (2021), Climate Finance Provided and Mobilised by Developed Countries: Aggregate Trends Updated with 2019 Data, Climate Finance and the USD 100 Billion Goal, OECD Publishing, Paris.
4 CPI (2021) Global Landscape of Climate Finance 2021 Barbara Buchner, Baysa Naran, Pedro de Aragão Fernandes, Rajashree Padmanabhi, Paul Rosane, Matthew Solomon, Sean Stout, Costanza Strinati, Rowena Tolentino, Githungo Wakaba, Yaxin Zhu, Jake Connolly, Chavi Meattle and Sandra Guzmán
5 "Temperatures." Climate Action Tracker, 2021.

country Parties from 2019 levels by 2025." Africa was already moving toward a similar goal: The African Development Bank and the Global Center of Adaptation launched a $25 billion program to finance accelerated adaptation in the region earlier in the year.[6]

Africa has great opportunities to help the world fight climate change but cannot do it alone.

Africa has great opportunities to help the world fight climate change but cannot do it alone. The protection and sustainable management of its forest and marine resources can provide essential carbon sinks. In fact, the Congo Basin—the world's second-largest rainforest and which absorbs 1.2 billion tons of CO_2 each year[7]—also has vital mineral reserves needed for the clean industries that underpin the net-zero commitments of countries worldwide. The energy, transport, and urban infrastructure that is yet to be built in Africa over the next two decades will either lock the region into a high-emission economic development trajectory or support the global climate goals if adequate additional resources to finance the extra costs of decarbonization are provided at the level and speed needed.

COP27—the "Africa COP"—is a unique opportunity to accelerate progress in climate action and mobilize the partnerships needed for Africa's rapid, inclusive, green, and resilient development. However, Africa's policymakers should not be passive recipients of what "others" can do for Africa in COP27. Africans should be well prepared and organized. They should have a unified, active, and consistent voice about the dire consequences of climate change for the continent and the urgency to take action.

First and foremost, the world needs to show at COP27 that progress and firm commitments—not only pledges—are moving the needle towards the 1.5°C warming level. As noted above, Africa absolutely cannot afford a 2.4°C warmer world: At that level of warming, adaptation measures in many parts of the continent may not be technically feasible or financially viable. This point highlights the importance of the other significant opportunity presented by COP27: Leaders must further raise the level of action, speed, and ambition toward climate adaptation, especially for Africa and vulnerable countries in other regions.

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As leaders and negotiators descend on Sharm el-Sheikh in 2022, they should focus on four distinct opportunities for decisive, urgent climate action. First, OECD countries and international financial institutions must increase their levels of concessional and private funding for adaptation, including a larger proportion of grants, rapidly and significantly. Second, leaders should increase their focus on the development and scaled-up rollout of adaptation technologies. Climate mitigation technologies receive most of the funding, attention, and support compared to adaptation technologies. At COP27, global leaders must push for a greater balance with adaptation technologies, including the localization and scaling-up of existing African solutions, including multi-hazard early warning systems combining earth observing systems and artificial intelligence with locally trusted communication channels in Africa. Importantly, the scaling up of climate-smart agriculture technologies and practices can tackle the malnutrition and stunting challenge of the region through more productive and resilient food systems. (See page 75 for a discussion on climate change's implications for Africa's food systems.) At the same time, climate-smart agricultural technologies can help store carbon in the soil and reduce the pressure on land-use change by improving efficiency and reducing food waste.

Third, Africa needs a decisive push to build capacity in climate change action, not only in ministries of the environment but throughout society. The engineers and urban planners need to incorporate climate considerations in designing and constructing Africa's infrastructure. African farmers need the best data and knowledge to make informed decisions to increase productivity in the face of a rapidly changing climate that is already impacting their crops. Low-income urban households and rural communities need to know what actions to take to better protect their lives and livelihoods against more frequent and intense climate shocks.

6 "Africa Adaptation Acceleration Program." African Development Bank, 2021.

7 Megevand et al. "Deforestation Trends in the Congo Basin: Reconciling Economic Growth and Forest Protection." The World Bank, 2013.

The landmark African Continental Free Trade Agreement can provide the foundation for early agreements on free trade of agricultural products that can balance losses caused by climate shocks.

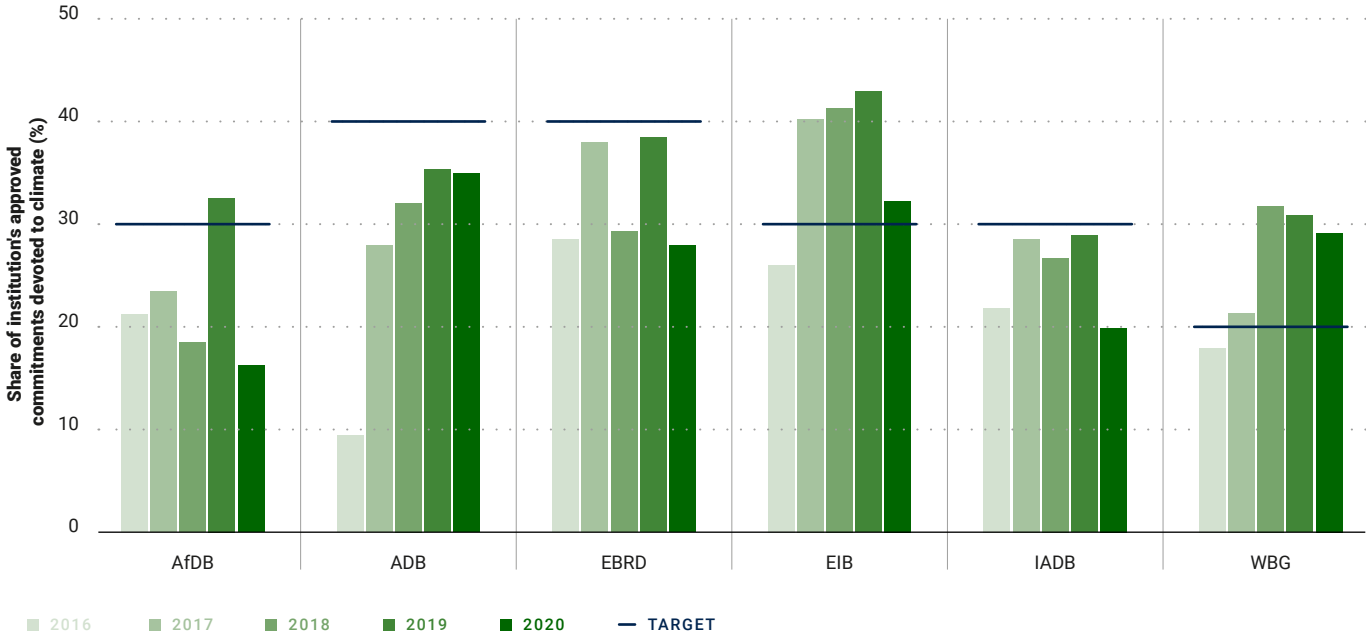
Fourth, leaders must pursue the win-win opportunity of rapidly deploying the global carbon market, while helping Africa enter this market, especially with programs that straddle both climate mitigation and adaptation. Nature-based solutions, energy access programs, and blue and green economy platforms can push forward the enhanced resilience of the region while supporting global emission reduction goals.

At the same time, Africa cannot wait. It must use all its tools to mainstream adaptation in its development path. With the pandemic still causing economic and livelihood damages in every corner of the continent, this task will be harder than ever. Still, low-cost, high-return adaptation measures should be prioritized. These range from land use and simple early warning systems to infrastructure maintenance that can reduce flood damage and protection of environmental assets that protect lives and livelihoods. Importantly, the landmark African Continental Free Trade Agreement can provide the foundation for early agreements on free trade of agricultural products that can balance losses caused by climate shocks.

At Sharm el-Sheikh, at the Africa COP, the world must take advantage of the opportunity to fulfill its responsibility together with Africa. A prosperous future of hundreds of millions of Africans will depend on the decisions and actions taken at COP27. A green and resilient path for Africa's development cannot wait.

FIGURE 4.1. ACTUAL CLIMATE FINANCE CONTINUES TO FALL SHORT OF TARGETS

As Africa continues to bear the burden of the world's climate crisis, the need for climate financing has grown. Despite stated targets, commitments from the multilateral development banks towards climate finance continue to fall short.



NOTE: ABD = Asian Development Bank; AfDB = African Development Bank; EBRD = European Bank for Reconstruction and Development; EIB = European Investment Bank; IADB = Inter-American Development Bank; WBG = World Bank Group
SOURCE: "2020 Joint Report on Multilateral Development Bank's Climate Finance." World Resources Institute. 2020.

Climate migration—deepening our solution

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Migration linked to climate change—often presented as a devastating picture of the plight and flight of vulnerable Africans—is becoming a daily feature on the 24-hour news. While these graphic images are worth a thousand words, they are far removed from the complexity of the factors at play. The narrative often precludes a focus on long-lasting sustainable solutions.

Sub-Saharan Africa has always been a region with high levels of mobility. For example, the Sahel pastoralists were the "original climate adaptors," migrating seasonally with their herds for water and pastureland. But with the effects of climate change—e.g., increased water scarcity, reduced pasture availability, and shifts in harvesting seasons—**migration patterns have been disrupted**, causing frequent tensions between farmers and pastoralists. Moreover, gender norms leave women without adequate tools or the capacity to adapt to climate change, as well as impede their ability to leverage migration for risk reduction. Furthermore, the growth and development needs of the youth—already facing a dearth of good jobs—are harmed by additional challenges created by the changing climate. Across Africa, more than half the 375 million young people entering the job market in the next 15 years will be living in rural areas. Without a focus on climate-smart productive jobs in the rural economy, youth will increasingly migrate to urban areas, as current climate-sensitive livelihoods become increasingly untenable due to crop productivity losses and water stress on pastoral and other livelihoods. Policies to address such obstacles already exist: As an example, investment in a solar-powered Kilishi (a highly demanded local meat delicacy) factory in northern Nigeria enabled a shift from use of firewood to cleaner meat drier domes and fuel-efficient kilns, conserving forests and bringing prosperity to the local community, while creating employment opportunities for the youth who would have otherwise migrated to cities in other states. The project has successfully attracted youth back from Abuja, the capital city, where they were performing menial jobs with low wages.

Gender norms leave women without adequate tools or the capacity to adapt to climate change, as well as impede their ability to leverage migration for risk reduction.

Migration and displacement numbers have been rising in recent years. In Mali, for example, climate change is compounding tensions surrounding land use and access to natural resources by changing where and when rain falls, where food and fodder can be grown, and where people can live. The World Meteorological Organization's (WMO) *State of the Climate in Africa 2020* report notes that the East and Horn of Africa region saw 1.2 million new disaster-related displacements, largely caused by floods, storms, and droughts.[1] The convergence of the COVID-19 pandemic with the locust outbreak in East Africa in 2020 amplified the impacts on poverty and food insecurity there. The interaction of these factors with the fragility and conflict in the Horn of Africa highlights the increasingly complex and interconnected drivers of mobility and immobility, with direct and devastating impacts on livelihoods. The urgency to understand how these issues will unfold in the future is critical.

The World Bank's 2021 *Groundswell* report, which covers all six of the Bank regions, unpacks the complexity of the climate-migration-development nexus and shows how climate change is a potent driver of internal climate migration.[2] The authors find that, as a consequence of slow-onset climate factors and in the absence of concrete climate and development action, **216 million people** in those regions could be compelled to migrate

1 WMO. (2021). "State of the Climate in Africa 2020." World Meteorological Organization, WMO- No. 1275.

2 Clement, V. et al. 2021. "Groundswell Part 2 : Acting on Internal Climate Migration." World Bank, Washington, DC. World Bank. License: CC BY 3.0 IGO.

within their countries by 2050. In addition, the poorest and those in the most vulnerable areas will be disproportionately impacted, with the strong possibility that sub-Saharan Africa sees the highest number of internal climate migrants—at an estimated **86 million by 2050**. Countries will see an emergence of climate migration hotspots as early as 2030, and inaction could see these hotspots expand and intensify.

The scale and trajectory of climate-induced migration means that policymakers cannot address one crisis at a time, in an ex-post fashion. Rather, we need **bold, transformative, and foresighted action** on two critical fronts.

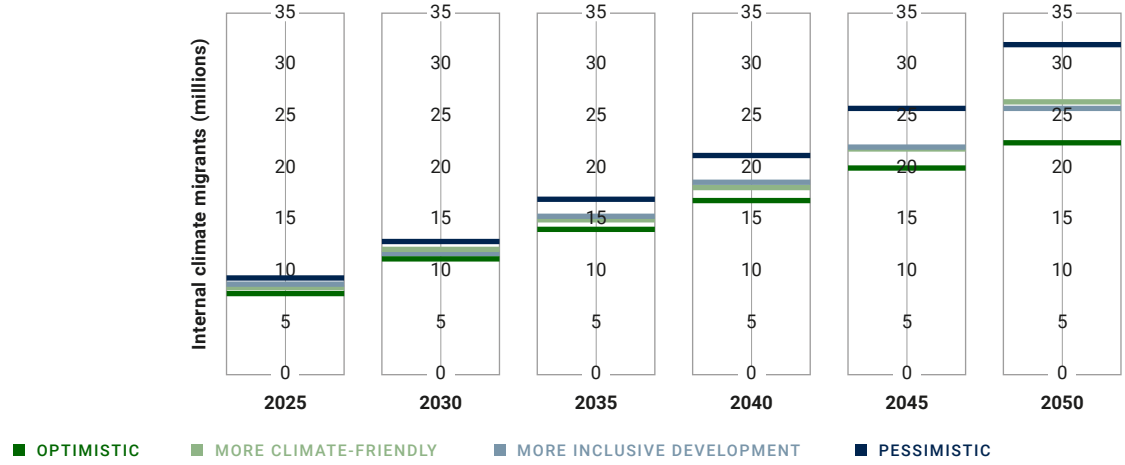
The scale and trajectory of climate-induced migration means that policymakers cannot address one crisis at a time, in an ex-post fashion.

- First and foremost, fulfilling the global responsibility to **cut greenhouse gas emissions is critical to reducing the scale and reach of climate impacts** on water availability, crop and ecosystem productivity, sea-level rise and storm surges, and labor productivity—all of which can trigger migration decisionmaking.
- Second, policymakers can usher the economies of affected countries **towards green and resilient pathways by pursuing far-sighted action** to avert distress-driven migration and harness climate-induced migration to foster economic and demographic transitions. Such policies require investments in human capital to support the next generation in productive and sustainable climate-smart jobs.

The World Bank's Corporate Climate Action Plan and the road map in the Next Generation Africa Climate Business Plan provide platforms for such action. We are not starting from zero. For example, the Great Green Wall (GGW) initiative is a coordinated effort across the Sahel-Saharan region to restore and sustainably manage land, water, and other natural resources, addressing both the damage of the natural environment as well as poverty. By 2030, the GGW initiative aims to restore 100 million hectares of degraded land, sequester 250 million tons of carbon, and create 10 million jobs in rural areas. The World Bank has committed $5.6 billion between 2020 and 2025 to support the 11 countries that are part of the GGW.[3] The World Bank is already implementing projects totaling nearly $4.1 billion and is moving to scale.

FIGURE 4.2. PROJECTED INTERNAL CLIMATE MIGRATION, LAKE VICTORIA BASIN, 2025-2050

The World Bank predicts that the Lake Victoria Basin will be hit hard by the impacts of climate change, potentially displacing over 30 million people by 2050.



NOTE: The World Bank's projection are based on combinations of two Shared Socioeconomic Pathways—SSP2 (moderate development) and SSP4 (unequal development)—and two Representative Concentration Pathways—RCP2.6 (low emissions) and RCP8.5 (high emissions). See the *Groundswell Africa* report for more details.
SOURCE: "Groundswell Africa: Internal Climate Migration in Lake Victoria Basin Countries," World Bank. 2021.

3 UNCCD. (2021). "Great Green Wall Event at COP26." United Nations Convention to Combat Desertification.

Addressing Africa's dual challenges: Climate change and electricity access

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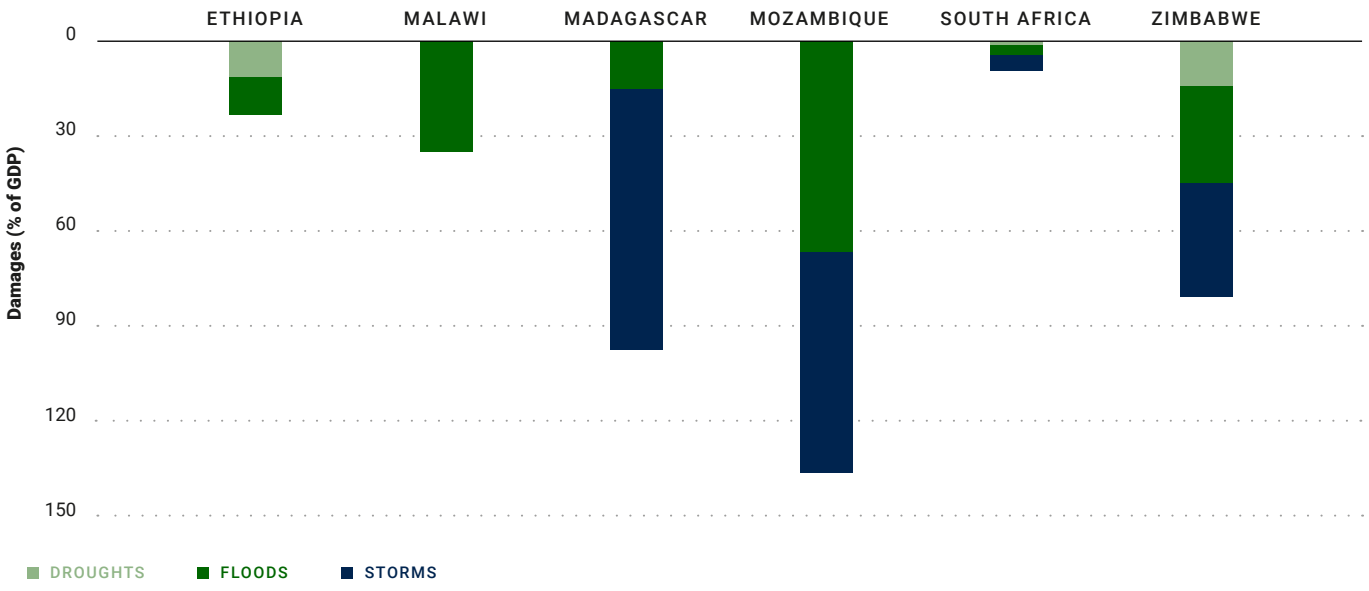
As leaders agreed late last year at the U.N. Climate Change Conference (COP26) in Glasgow, if the world fails to come together to mitigate the impending impacts of climate change, Africa will grapple with drought, rising sea levels, potential conflicts over water access, and increasingly frequent severe weather events, among other possible natural disasters.

The global response to climate change must incorporate the historic emissions context. As has been widely noted, China, Europe, and the United States bear the most responsibility for greenhouse gas emissions. Prioritizing the transition to renewables and imposing higher emission reduction requirements on the EU, U.S., and China will ease the burden on those nations that still need a variety of power generation methods to increase energy access.

Not only does Africa bear the least responsibility for greenhouse gas emissions, but the forests of the Congo Basin (second only to the Amazon) are vital to absorbing the CO_2 emitted from other continents. Keeping the lungs of the world intact must be more valuable than cutting them down. Maintaining these natural resources is essential to combatting global climate change and requires external support to properly value and incentivize their preservation.

FIGURE 4.3. ANNUAL ECONOMIC IMPACTS OF NATURAL DISASTERS, SELECT COUNTRIES, 2000–2018

Between 2010 and 2018, climate change-related extreme weather events have resulted in significant economic costs for a number of countries in sub-Saharan Africa. Experts estimate that such events will only get more frequent and intense without immediate climate action.



SOURCE: "Regional Economic Outlook: Adapting to Climate Change in Sub-Saharan Africa." International Monetary Fund, 2020.

Another big challenge is the lack of access to electricity. Today nearly 600 million of the 1.2 billion Africans lack access to electric power.[1] In sub-Saharan Africa, 12 million new people enter the workforce every year.[2] Our prosperity and peace are incumbent on powering our economic development and creating enough gainful employment opportunities for our growing population. That is not something that can be done in the dark. Without achieving universal access to electricity, we will be vulnerable to underdevelopment, high unemployment, a migration crisis, and instability. Given the close interplay of these challenges as well as their threat to the overall region, we must find a way to solve both if our continent is to realize a peaceful and prosperous future. (For more on the relationship between climate and migration, see the viewpoint on page 71.)

Our prosperity and peace are incumbent on powering our economic development and creating enough gainful employment opportunities for our growing population. That is not something that can be done in the dark.

To narrow the energy access gap as quickly as possible, Africa must employ a variety of power sources already utilized by the U.S., EU, and China while simultaneously phasing out coal. Such a shift requires mobilizing development financing to support natural gas, hydro, and geothermal projects, as well as wind and solar energy.

Importantly, the double standard for those nations in the Global North with universal energy access was on full display at COP 26. For example, EU climate chief Frans Timmermans said, "[The European Union] will have to also invest in natural gas infrastructure. As long as we do it with an eye of only doing this for a period, then I think this is a justified investment."[3] The EU and U.S., who control significant voting stakes in the largest international financial institutions (IFIs), then led a pledge by 20 countries to stop financing gas projects abroad.[4] Without support from IFIs, African nations will be unable to build and maintain the infrastructure required to utilize our natural gas. This sharp contrast in words and actions sends the message that natural gas is considered a bridge to renewables in the Global North—where access to electricity is secure—while natural gas is an unnecessary luxury to Africans who still do not have access to reliable electricity.

The global transition to renewable energy will mean exponentially scaling up the production of batteries, electric vehicles, and other renewable energy systems, which depend on Africa's natural resources.

Finally, African nations must capitalize on the green economic revolution. The global transition to renewable energy will mean exponentially scaling up the production of batteries, electric vehicles, and other renewable energy systems, which depend on Africa's natural resources. For example, the Democratic Republic of the Congo accounts for 70 percent of the world's cobalt, the mineral vital to battery production.[5] With the demand for cobalt expected to at least double by 2030, it is unfathomable that the miners, who provide the world with the material essential to the energy transition, return to homes without electricity. We need to leverage our control over such markets to elevate working conditions, move beyond raw material exports toward manufacturing and processing capacity, and capture greater portions of green energy supply chains. We cannot afford to repeat the mistakes of past economic revolutions.

1 IEA. (2020). SDG7: Data and Projections, IEA, Paris.
2 Zeufack, A. G., Calderon, C., Kubota, M., Korman, V., Cantu Canales, C., & Kabundi, A. N. (2021). Africa's Pulse, No. 24, October 2021. Washington, DC: World Bank.
3 Ainger, J. and Krukowska, E. (2021). "EU's Climate Chief Signals Natural Gas Will Be Included in Green Transition." Bloomberg.
4 Abnett, K. and Jessop, S. (2021). "U.S., Canada among 20 countries to commit to stop financing fossil fuels abroad." Reuters.
5 Campbell, J. (2020). "Why Cobalt Mining in the DRC Needs Urgent Attention." Council on Foreign Relations.

The urgency and benefits of climate adaptation for Africa's agriculture and food security

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Food and nutrition security in Africa is off track: In 2020, more than one in five people in Africa faced hunger—more than double the proportion of hungry people in any other region. In fact, the continent remains a net food importer at an annual cost of $43 billion.[1]

Food security in Africa demands urgent and serious attention. Climate change is already stalling progress by interacting with multiple other stressors and shocks, including inequality, degrading natural resources, conflict, and the COVID-19 pandemic.

A 3°C warming trajectory will cause catastrophic disruption to African food systems within the next 30 years. In fact, under a 3°C warming scenario, Africa is expected to lose up to 30 percent of current growing areas for maize and banana and 60 percent for beans by 2050. Many more millions of Africans will suffer from hunger. By 2050, the 282 million of Africa's population who are undernourished today is expected to rise to 350 million.[2] A 1.5°C trajectory provides more options for adaptation of African food systems, but still demands urgent action. Current national pledges put the world on a 2.4°C trajectory even if they are fully achieved.

WE NEED A WHOLE FOOD SYSTEM APPROACH

Leading adaptation options for food systems are well-defined and build on evidence and experience, including in Africa. Among these options, the priorities for public sector investment in Africa are fivefold: Research and extension, land restoration, water management, infrastructure, and climate information services. Some of the adaptation practices have long-term African experience to build on (e.g., landscape management, agroforestry), while others are newer areas of endeavor on the continent or globally (e.g., fiscal measures, co-benefits of mitigation finance).

Notably, a modern approach to climate adaptation needs to move beyond purely agricultural solutions into whole food system approaches. Problems with agricultural production can be addressed not only through on-farm solutions, but also through entire value chains and through policy incentives for consumers and food businesses.

THE COSTS OF FAILURE

Financing adaptation to climate change in the agriculture and food system in Africa will be more cost-effective than financing increasingly frequent and severe crisis response, disaster relief, and recovery pathways. In fact, the costs for adaptation action in Africa are about $15 billion (0.93 percent of regional GDP).[3] This number is a fraction of the cost of inaction, which could rise to more than $201 billion (12 percent of GDP). There will also be significant regional variations in the cost of inaction. For instance, West and East Africa could lose up to about 15 percent, and Southern Africa up to about 10 percent of their GDPs by 2050 if adaptation measures are not taken.

1 Balineau, G., Bauer, A., Kessler, M., and Madariaga, N. (2021). Food Systems in Africa: Rethinking the Role of Markets. World Bank, Washington, D.C.

2 Nelson, G.C. et al. (2010). "Food security, farming, and climate change to 2050: Scenarios, results, policy options." International Food Policy Research Institute (IFPRI), Washington D.C.

3 Based on a synthesis of existing studies, as found in the Global Center on Adaptation's State and Trends in Adaptation 2021 report.

Agriculture and food are the leading sectors for synergies across development and climate action, delivering simultaneously on the Sustainable Development Goals, national growth and food security goals, and climate adaptation and mitigation.

The agricultural financing gap in many African countries surpasses government budgets and available donor funding. Climate finance flows from multilateral development banks to the agriculture sector in Africa increased from $433 million in 2015 to $2 billion in 2018 and then declined to just over $1 billion in 2020.[4] Moreover, the financing gap for climate adaptation is at risk of widening in the future due to fiscal drain on resources from the COVID-19 pandemic. Low-income countries are especially hard-hit as they bear a disproportionate weight of climate disasters. (For more on climate financing for Africa, see page 78.)

Agriculture and food are the leading sectors for synergies across development and climate action, delivering simultaneously on the Sustainable Development Goals, national growth and food security goals, and climate adaptation and mitigation. The time to act on adaptation action in agriculture and food systems is now.

4 Data compiled from the MDB joint reports on climate finance by African Development Bank (AfDB), the Asian Development Bank (ADB), the Asian Infrastructure Investment Bank (AIIB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter-American Development Bank Group (IDBG), the Islamic Development Bank (IsDB) and the World Bank Group (WBG).

Managing existential risk and climate resilience: The case of Nigeria

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The impact of climate change on Nigeria's environmental and socioeconomic systems is compounding the country's fragility risks. Extreme weather patterns—fiercer, longer dry seasons and shorter, more intense rainy seasons—are exacerbating challenges confronting local communities. Extensive cultivation and overgrazing have been compounded by desertification, rendering large swaths of land in northern Nigeria unproductive. Unpredictable and higher-intensity rainfall in southern Nigeria is resulting in a loss of crops and the displacement of communities. Depleting environmental resources in every part of the country pose a serious food security challenge in the face of a rapidly growing population. In fact, the 2021 Notre Dame Global Adaptation Index ranks Nigeria as the 53rd most-vulnerable country and the 6th least-ready country in the world to adapt to climate change.[1]

As a result, growing desperation over food supply is driving resource conflicts across Nigeria. In short, farmer/herder violence over the past decade has worsened and disrupted business operations across the country. Urgent action is needed to improve food and economic resilience to prevent deeper crises.

The COVID-19 pandemic compounded Nigeria's food security and inequality challenges. Although spared the worst of the public health impact, the nation's lockdown, imposed to contain spread of the virus, disrupted food production and hit household incomes hard. In fact, only 50 percent of agricultural workers in Nigeria were able to work through April and May 2020—two critical months during the planting season for Nigeria's predominantly rain-fed agriculture.[2] By August 2020, an estimated 70 percent of households in Nigeria

1 ND-GAIN. (2021). ND-GAIN Country Index. Notre Dame Global Adaption Initiative.

2 National Bureau of Statistics; World Bank. (2020). "COVID-19 Impact Monitoring : Nigeria, Round 4." World Bank, Washington, DC. © World Bank. License: CC BY 3.0 IGO.

reported medium to severe food insecurity. Over 67 percent reported that their total income decreased compared to August 2019.

Poor governance and stakeholder engagement remain the greatest challenges to climate resilience in Nigeria. Although awareness and understanding of the impacts of climate change are growing among key stakeholders, the government has been unable to galvanize effective collective action for mitigation and resilience.

Poor governance and stakeholder engagement remain the greatest challenges to climate resilience in Nigeria.

POLICY RECOMMENDATIONS

The underlying pressures that are compounding Nigeria's climate resilience situation can only be eased over the long term. But collective effort must start now.

The National Adaptation Plan (NAP) published by the Federal Ministry of Environment in June 2020 articulates a framework for different sectors of the economy to work together to address Nigeria's climate challenges. It proposes a sectoral governance approach and defines specific roles and responsibilities for private sector, civil society, and national and subnational governments. It also seeks to align other existing economic, national development, and climate resilience policies with the country's climate goals.

Reducing food and nutrition vulnerability while enhancing environmental resilience is perhaps Nigeria's most critical climate adaptation objective. The National Agricultural Resilience Framework (NARF) provides an excellent policy platform to achieve this goal. The National Livestock Transformation Plan (NLTP) can also help address farmer-herder conflict by creating mutually beneficial relationships and reducing the need for harmful competition between these two critical stakeholder groups.

Although Nigeria has 2.6 percent of the world's population, it is only responsible for 0.26 percent of global emissions. Importantly, though, reducing emissions in the energy sector can protect Nigeria's rapidly depleting tree cover and improve the quality of life for millions of citizens.[3] Indeed, the National Energy Transition Plan announced by President Muhammadu Buhari at COP26 in Glasgow promises to improve energy access to over 25 million Nigerian homes while reducing dependence on fuel wood.[4]

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Developing and announcing these policies represent a good start, but the government needs to translate its published objectives into diligent action. The Nigerian Federal Government must deepen consensus around its Nationally Determined Commitments and galvanize implementation programs that are inclusive of women, youth, and marginalized communities. These groups have significant roles to play in decreasing population pressure, reducing energy poverty, and improving productivity of food value chains.

In the end, Nigeria will require the assistance of the international community to successfully manage its climate fragility risks. With a population projected to balloon to 400 million by 2050, the stakes are high not only for Nigeria, but for the continent and rest of the world.

3 Muntean, M. (2018). "Fossil CO2 emissions of all world countries - 2018 Report." Publications Office of the European Union, Luxembourg, 2018, doi:10.2760/83904, JRC113738.

4 Bel, S. et al. (2021). "New commitments at UN energy summit a major stride towards affordable and clean energy, but much work ahead to halve energy access gap by 2025." SE for ALL.

The criticality of climate finance for Africa

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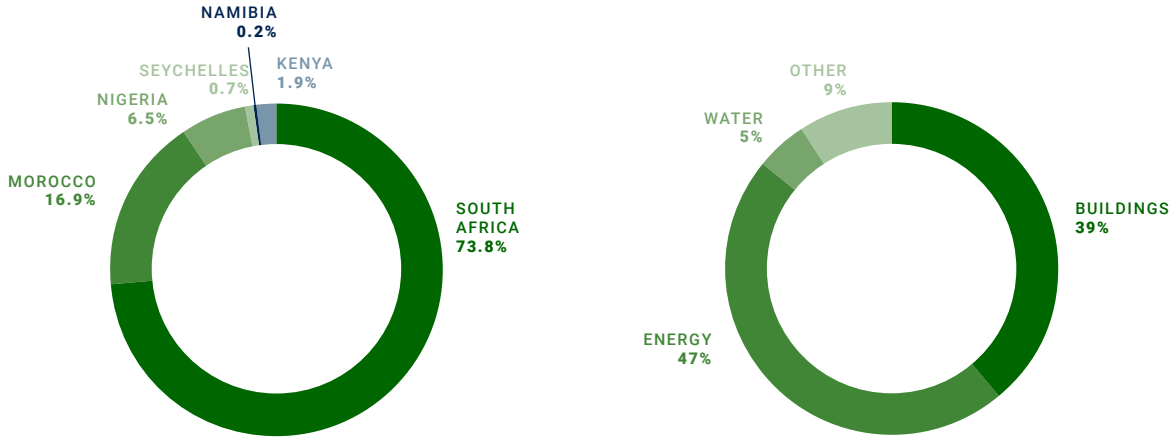
Climate finance will be critical for enabling Africa to adapt to the growing impacts of climate change and to ensure that its future development path is consistent with the goal of limiting global warming to no more than 1.5°C. Africa has contributed little to global emissions so far, but it is already being disproportionately affected by the impacts of climate change. How Africa develops will also be critical to future emissions given that its energy use is projected to grow rapidly to meet its development needs, with its share of the world's population projected to increase from 17 percent to 40 percent by 2100, even as the world population increases from 7.9 billion to almost 11 billion by the end of the century.

A low-carbon, climate-resilient path offers Africa the opportunity to avoid the mistakes of the past and seize the opportunity to leapfrog to a better form of growth that can deliver on both its development and climate goals. It will require, however, a major ramp-up in the scale and quality of investments in three critical areas: energy transitions and related investments in sustainable infrastructure; investments in climate change adaptation and resilience;

FIGURE 4.4. HOW ARE GREEN BONDS BEING USED IN AFRICA?

Within Africa, the distribution of the funds raised by green bond issuance has been overwhelmingly concentrated in South Africa, which accounts for approximately three-fourths of the continent's market share. Together with Morocco and Nigeria, these three countries comprise more than 97 percent of Africa's unilateral green bond issuance. The use of this climate-oriented funding is primarily concentrated in energy and buildings, which together make up 86 percent of the sectors financed by green bonds.



SOURCE: George Marbuah, Stockholm Sustainable Finance Centre, "Scoping the Sustainable Finance Landscape in Africa: The Case of Green Bonds," 2020.

and restoration of natural capital (through agriculture, food and land use practices) and biodiversity. All three areas are important for the continent although relative needs will vary by country. Altogether, Africa will need to invest around $200 billion per year by 2025 and close to $400 billion per year by 2030 on these priorities.

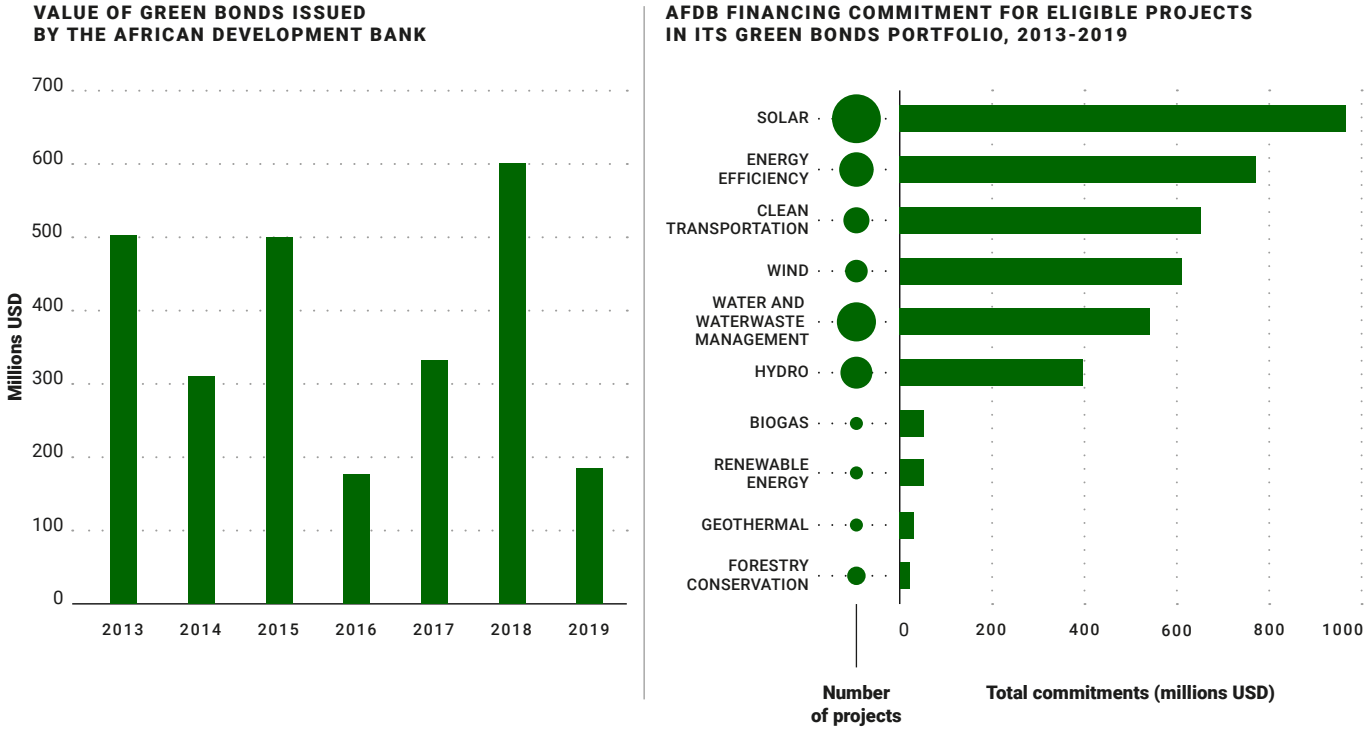
In order to meet the scale and urgency of the challenge, Africa must be prepared to do its part. It must put in place robust institutional structures to set ambitious Nationally Determined Contributions and translate them into tangible investment programs and pipelines of projects. Country platforms, such as the one that South Africa launched for its just energy transition at COP26, can be adopted by other countries to give impetus to scaling up transformative investments. Africa must also make concerted efforts to boost domestic resource mobilization to ensure the long-term sustainability of the necessary investments.

Africa will also not be able to finance the scale of the investments needed without a dramatic step up in international effort.

But Africa will also not be able to finance the scale of the investments needed without a dramatic step up in international effort. A starting point must be to tackle Africa's debt constraints. From a climate perspective, debt-for-climate and debt-for-nature swaps could be part of the overall solution. Africa will also need a major scaling up of both international public and private finance. To date, only $80 billion of the $100 billion per annum commitment by developed countries for developing countries by 2020 has been met; of this, only around $20 billion was provided to Africa over 2016-2019. Given the scale of needs, the Africa Group of Negotiators has called for $1.3 trillion a year in climate finance to be made available from 2025.

FIGURE 4.5. GREEN BOND FINANCING BY THE AFDB

Access to finance is a major challenge for Africa to combat climate change. Green bonds offer a novel sustainable financing tool to fund climate change mitigation and adaptation related projects. Green bond issuances by the African Development Bank (AfDB) are most heavily concentrated in projects related to solar, wind, energy efficiency, and clean transportation. Since 2013, the AfDB has raised more than 4 billion USD with green bonds.



NOTE: Data for 2017 differs from what the AfDB has reported on its green bond issuance for the year. See Marbuah (2020) for details.

NOTE: Data includes multinational projects that are not specific to any one country.

SOURCE: George Marbuah. Stockholm Sustainable Finance Centre. "Scoping the Sustainable Finance Landscape in Africa: The Case of Green Bonds." 2020.

COP27, as Africa's COP, provides an opportune moment to go beyond the $100 billion through an immediate acceleration in the delivery of climate finance and setting a roadmap for an ambitious post-2025 target.

Concessional finance from bilateral donors remains the most critical component of climate finance for Africa given its fiscal constraints and large needs for adaptation and resilience, as well as nature and biodiversity. It is also critical for scaling up other pools of climate finance, including the multilateral climate funds and the multilateral development banks (MDBs), and ultimately leveraging the much larger sums of private finance that will be needed. Consequently, bilateral finance must be doubled by 2025 from its 2018 level, with a higher proportion of grants and a higher share for Africa. Africa will also need much higher levels of support from development finance institutions, from both concessional and market-based windows. The successful replenishment of IDA has provided a good base, but ambitious replenishments are also called for the African Development Fund and concessional climate funds including the Global Environment Facility and the Climate Investment Funds. Additional concessional support from the recycling of Special Drawing Rights (SDRs), including the proposal to establish a Resilience and Sustainability Trust in the IMF, as well as from philanthropic sources. Africa should also be enabled to access the market-based windows of the MDBs for revenue-generating investments given the magnitude of the financing requirements. Private investment and private finance can also play a much bigger role than in the past, but this will require risk mitigation at scale by development financing institutions (DFIs) given that only four countries in Africa are investment grade and that 56 percent of African countries with a credit rating have suffered downgrades since the COVID-19 pandemic.

As Africa seeks to build back better from the pandemic and embark on the transformation of its economies to a low-carbon, climate-resilient future, it must be assured of effective and timely support. COP27, as Africa's COP, provides an opportune moment to go beyond the $100 billion through an immediate acceleration in the delivery of climate finance and setting a roadmap for an ambitious post-2025 target. Without such ambition, Africa will not meet its climate and development ambitions, and the world will fail in meeting its collective climate goals.

The view from Freetown, Sierra Leone

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Freetown's unique topography—its communities extend from the coastline up into its surrounding mountains—exposes it more acutely than other African cities to the risks of a changing climate. At the same time, the city is increasingly shaped by the impacts of climate change.

Take the issue of extreme heat: This phenomenon poses a direct challenge to water access in the dry season, particularly to inhabitants of the 74 informal settlements in which up to 40 percent of Freetown's occupants live. Beyond water access, this extreme heat significantly worsens air quality in the city, especially in conjunction with vehicle emissions and open dumping. This deterioration in air quality then poses health risks to residents, such as respiratory infections.

I give this example to make the point that we cannot choose to prioritize adaptation over mitigation, or vice versa, when it comes to tackling climate change. We must address both. While Freetown, like the African continent as a whole, is not a big emitter of greenhouse gases, there are still opportunities to further reduce our emissions. For instance, my administration is introducing a mass transit cable car system that will be more climate-friendly and green than existing city transport options.

We cannot choose to prioritize adaptation over mitigation, or vice versa, when it comes to tackling climate change.

Under the #FreetownTheTreetown initiative, we are planting one million new trees. This initiative is an example of an approach that delivers both mitigation—in that planting trees can create a carbon sink to offset emissions—and adaptation—as increasing tree cover reduces the impacts of extreme heat and the risk of landslides.

LOCAL AFRICAN GOVERNMENTS SHOULD BE EMPOWERED TO DO MORE

In Freetown, land-use planning and building permit powers that should have been devolved to district structures remain in the hands of central government—a situation that contributes significantly to poor urban management and increased risk of environmental damage. Reforms on the city level can have indirect effects for the country—and the world. However, for this to succeed, local leaders must be brought more substantively into the conversation, listened to, funded, and supported to act decisively. Nation-state organizations like the African Union can do more to create platforms for city-level authorities to contribute to wider conversations about climate change.

Similarly, leaders should work to unlock climate financing at the city and local levels, as going through national governments to access funds is a time-consuming process. For now, the bulk of funding is available only to national governments, which inhibits efforts to deliver fast solutions to tackle this existential threat in not just Freetown, but in many cities.