

Regional Climate Overview **Africa**



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Africa's Role in Climate

Africa faces severe challenges from the impacts of climate change. Yet with its unique combination of low emissions, a young population, and plentiful natural resources—including minerals essential for clean energy technologies¹—Africa is poised to be a global leader in climate action.

Africa is home to 54 countries and nearly one-fifth of the world's population yet is responsible for less than 4 percent of total global emissions. Despite contributing the least to climate change, Africans disproportionately experience its impacts. In addition to increasingly extreme weather events, communities across the continent face a litany of challenges: reduced food security, limited access to energy, lower economic growth, water scarcity, adverse effects on human health, biodiversity loss, displacement, conflict, and political instability.

It is no easy task, but Africa can convert these challenges into opportunities through investments in sustainable development to combat climate change and bring about greater social and economic prosperity. But current financing is inadequate for the continent to boost its capability to scale up climate action. To achieve Africa's goals at the national, regional, and global levels, investment is required in key areas including energy transition, nature-based solutions, movement-building, strategic communications, and diplomacy.

It is also noteworthy that 65 percent of the world's remaining arable land is in Africa.² Most agriculture across the continent is dominated by smallholder farmers who supply nearly 80 percent of Africa's food³ and employ the majority of Africans.⁴ Climate change has reduced the productivity of African farms



Urbazon

Although Africa is responsible for less than 4 percent of the world's total emissions, the continent is severely impacted by climate change—yet it is also uniquely positioned to become a global leader in clean renewable energy and green development.

1 [UN trade and development, Unlocking Africa's critical mineral wealth: Energy transition can pave path to new prosperity, 2024](#)

2 [African Development Bank Group, Feed Africa, 2019](#)

3 [NPR, Small-scale farmers in Africa will be the beneficiaries of huge humanitarian prize, 2023](#)

4 [African Development Bank Group, Feed Africa, 2019](#)

by an estimated 34 percent⁵ and without action, the number of malnourished people in Africa will increase along with emissions. Because 60 percent of the continent's total emissions come from land-use change and agriculture,⁶ and these emissions are multiplying, it is critical to advance sustainable, climate-friendly agricultural practices.

Countries and regions across Africa face many of the same as well as some unique challenges, and there is no one-size-fits-all approach. A variety of strategies are being implemented, examples of which are highlighted below.

South Africa

South Africa relies on highly polluting coal for 70 percent of its primary energy source,⁷ making it the world's 17th-largest greenhouse gas emitter.⁸ For decades, South Africa has also experienced an energy shortage, with power outages costing the economy the equivalent of \$51 million per day in lost productivity.⁹ The country is particularly vulnerable to climate change due to water and food insecurity as well as impacts on health, communities, infrastructure, and critical ecosystem services.

To support ambitious plans to end poverty and inequality, South Africa has incorporated climate change strategies into its development framework. This includes plans to diversify the energy landscape by setting targets to nearly triple current renewables capacity to 31.2 GW by 2030,¹⁰ gradually retire coal-fired power facilities, and reduce regulatory hurdles to commercial electricity generation. As a result, South Africa has emerged as the continent's biggest potential producer of renewable energy, laying the groundwork for a long-term transition away from fossil fuels even as the country navigates implementation obstacles that are slowing its progress toward a more reliable, green energy system.

The Congo Basin

The Congo Basin forest spans nine countries in central Africa and is the second-largest tropical rainforest on Earth. It is also the world's largest net carbon sink, providing major carbon removal

Select Philanthropic Funders Include:

- Bezos Earth Fund
- IKEA Foundation
- Rockefeller Foundation
- Schmidt Family Foundation
- Shell Foundation



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5 [World Meteorological Organization, Africa suffers disproportionately from climate change, 2023](#)

6 [FAO, Emissions due to agriculture: Global, regional, and country trends 2000–2018](#)

7 [IEA, Energy system of South Africa](#)

8 [Climate Watch, South Africa Climate Change Data](#)

9 [Bloomberg, Blackouts May Cost South Africa \\$51 Million a Day, Central Bank Says, 2023](#)

10 [Climate Action Tracker, South Africa: Energy supply, 2020](#)

benefits with an estimated value of \$55 billion annually.¹¹ The Congo Basin also provides food, shelter, and employment to millions of people, including Indigenous communities. In countries like the Democratic Republic of Congo (DRC), deforestation is a major threat. Decades of armed conflict in eastern DRC have not only led to resource plundering (including poaching) by militia groups, but many displaced communities have been forced to encroach on the remaining forests for firewood and charcoal to sell or use as fuel for cooking.

The Congo River Basin, and especially the DRC, holds massive reserves of minerals, including cobalt and copper, that are critical to the clean energy transition. Conserving this globally important forest will require ensuring that Indigenous and local communities have alternative ways to provide for their families, and that their land and resource rights are secured and protected.

East Africa

Agriculture is the foundation of the East African economy, accounting for 25–40 percent of GDP in national economies and a primary source of income for more than 80 percent of the region's population.¹² Smallholder farmers cultivate staple food crops alongside valuable export commodities, adhering to traditional practices while gradually adopting improved methods like agroforestry and cover cropping to increase productivity and respond to the devastating effects of climate change. In fact, East African countries are experiencing some of the most severe impacts on the continent due to many intersecting factors, including high population growth, extreme poverty, poor infrastructure, overreliance on rain-fed agriculture, and limited availability and quality of meteorological data.

Exploring adaptation strategies to help farmers boost resilience is imperative. Some communities are embracing approaches that protect traditional systems while improving well-being. For example, farmers tackle land-use problems by carefully selecting tree species for degraded areas, encouraging natural regrowth, building water-saving structures, and practicing farming methods that work with local ecosystems rather than against them. These efforts help fortify against drought and floods while creating new economic opportunities. But while nature-friendly practices are beneficial for water conservation, wildlife protection, job creation, and food production, speeding their adoption remains a challenge.



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¹¹ [Center for Global Development, How Much Should the World Pay for the Congo Forest's Carbon Removal?, 2022](#)

¹² [East African Community, Agriculture and Food Security](#)

Pathways to Impact

Capitalizing on Africa's potential to lead climate solutions will require rapidly expanding action on numerous fronts, targeting three main pathways:

1. Improve energy access and support a just transition toward clean energy.

For Africa, the energy transition must be not only about reaching net-zero, but also increasing access to energy and ensuring livelihoods for a fast-growing population. With Africa's urban population predicted to double by 2050, along with a growing middle class, vehicle ownership is expected to triple from 56 million in 2020 to over 150 million by mid-century.¹³ Yet 580 million of Africa's 1.4 billion people do not have access to energy,¹⁴ and air pollution causes 1.1 million premature deaths annually across the continent.¹⁵ Africa has the opportunity to leapfrog the dirty energy systems of the past toward a more modern, people-centered renewable energy system.

- **Ramp up clean energy development.** To meet demand, countries and other stakeholders must create and implement national energy transition plans, work together to build regional strategies that account for generating and transporting clean energy to meet populations' needs, and secure and scale up financing for renewables, especially solar and wind.
- **Increase access to clean energy.** By aggressively deploying its renewable energy resources, the continent has the potential to provide lower cost energy to the hundreds of millions who do not have it, at an estimated 90 percent lower emissions.¹⁶
- **Establish green value chains to process critical raw materials on the continent.** With Africa's significant mineral reserves, local processing plants can create more job opportunities and accelerate Africa's own energy transition. Policies that support these value chains and address structural trade deficiencies are key.
- **Support transition measures for workers.** For existing workers in the fossil fuel industry and related fields, support for a transition to a green energy system can be provided in the form of social protection, promotion and protection of labor rights, re-training and upskilling, job guarantees, and more. It is also critical to ensure African ownership in green energy businesses.

2. Boost agricultural productivity and resilience by improving land-use practices.

The majority of Africa's workforce is in the agricultural sector, yet due to structural and environmental challenges, millions still suffer from food insecurity which will be exacerbated by climate change. Even though Africa contains 65 percent of the world's remaining arable land, degraded ecosystems encompass about half the land on the continent and pose

¹³ [Energy for Growth Hub, Africa's Vehicle Fleet Could Double by 2050: What Does this Mean for EVs?, 2025](#)

¹⁴ [IEA, Data and Projections: Access to electricity, 2024](#)

¹⁵ [The Lancet, Air pollution and development in Africa: impacts on health, the economy, and human capital, 2021](#)

¹⁶ [Brookings, Africa: Navigating the energy transition, 2024](#)





major challenges to communities' ability to adapt to shifting weather patterns. Bolstering resilience is key to not only maintaining but also improving food security and economic development.

- **Increase crop and livestock productivity and diversity.** A multitude of practices and policies can close the productivity gap for Africa's small farmers and help them adapt to climate change. These include diversifying their farms to protect against climate risks; solar-powered irrigation; integrated pest management; and efforts to improve livestock health, such as vaccination.
- **Restore healthy ecosystems on overburdened land.** Farmers can support food sovereignty and reduce emissions while reviving resilient ecosystems that provide a range of benefits including improved crop yields, reduced flooding, and more livelihood opportunities for communities.
- **Transform the foundation of the agricultural system.** Shifting to sustainability requires pursuing a range of actions at once. These include establishing African-led financing platforms to channel critical funds to local groups working to implement food system transformation and nature-based solutions, in addition to reforming government policies hindering progress, like eliminating subsidies for harmful chemical fertilizers that may encourage overuse.

3. Reduce deforestation by transitioning to a sustainable, low-carbon model that delivers greater and broader economic benefits.

Africa's deforestation is driven by clearing land for agriculture, including growing crops and livestock grazing, and for wood to use as fuel. Deforestation occurs all over the continent, in the rainforests of the Congo Basin and in dry forests that stretch across the Sahel and Southern Africa. This pathway complements the agriculture pathway above, since improving farming can help slow pressure for land-use changes.

- **End illegal deforestation.** Illegal logging costs African countries billions every year, reducing biodiversity and amplifying the impacts of climate change. Community-based forest monitoring using satellites and regional coordination to make the logging trade more prohibitive can be effective to stop illegal logging.
- **Improve forest management governance and land tenure rights for local communities.** Most land in Africa is owned by the state, and local customary tenure laws make land ownership a complex challenge that varies from country to country. Protecting local and Indigenous people's land ownership results in more sustainable practices, so supporting land tenure for communities is a critical intervention point.
- **Scale clean cookstoves.** Local communities rely on cutting down forests for firewood and producing charcoal for their energy source. Ensuring wider access to renewable and clean energy sources and increasing access to clean cookstoves will lessen demand for cutting down forests.