

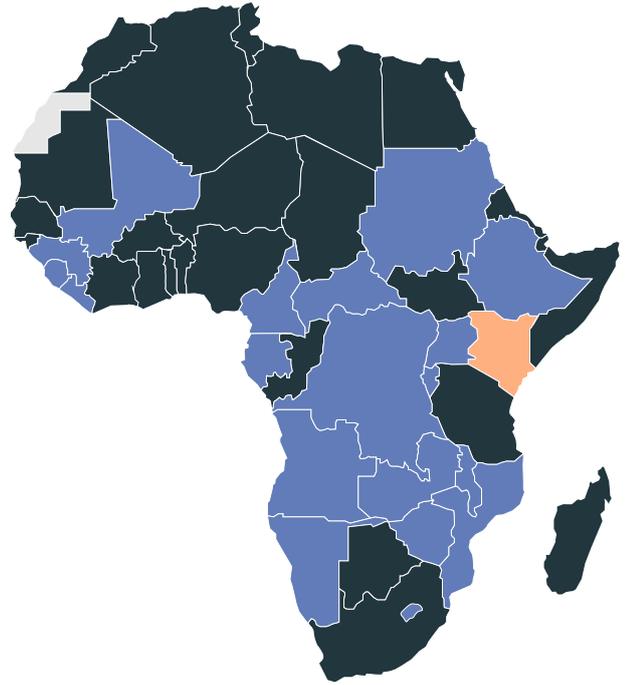
REPORTING CLIMATE CHANGE: A PRACTICAL GUIDE FOR AFRICAN JOURNALISTS

Africa's Energy Future – A Continent at
the Crossroads



Fast Facts

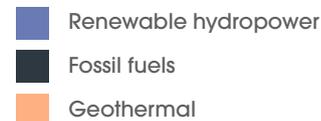
Caught between the need to accelerate industrial development to improve economic and social welfare and the need to avoid the worst effects of climate change, Africa stands at a crossroads in its energy future. African nations can choose to exploit their fossil fuel resources or transition to green economies based on renewable energy (RE). Embracing the latter would allow the continent to reject the energy systems that enabled Africa's imperial and colonial history and instead forge a future built on clean, sustainable technologies that support development while responding to the climate crisis.



Source: [Mo Ibrahim Foundation](#)

Primary sources of electricity in African countries

Twenty-two African countries use renewable energy as their primary electricity source, but less than half their populations have access to electricity.



The Story in Numbers:

- 57%** of Africa's population has access to electricity (IEA, 2022)
- 3.8%** of global greenhouse gas emissions are produced by Africa (Statista)
- 5 - 15%** the estimated GDP Africa is losing to climate change annually (AfDB)
- \$8.5 billion** the economic damages caused by weather, climate and water-related hazards in Africa in 2022 (WMO)
- 39%** of the world's clean energy potential is in Africa (Reliefweb)
- <3%** of the world's installed renewables-based electricity generation capacity is in Africa (IRENA, 2021)
- ± \$1.4 trillion** the amount needed before 2030 to implement Africa's climate commitments (AfDB)



3 Things you should know:

1.

Africa is in a position to leapfrog traditional power systems and adopt renewable energy and green technology on a massive scale to achieve electrification and development.

A green energy transition cannot happen without funding. Investment in renewable energy in Africa remains critically

2.

underfunded, having attracted only two percent of global renewable energy investments in the past two decades.

Green hydrogen could be the technology that helps transition Africa away from fossil fuels towards a renewable energy future.

3.

Among the many challenges facing the African continent, two of the biggest competing priorities are the need for energy to drive development and the climate change crisis.

African nations are under pressure to develop to meet the needs of a population set to nearly double in the next 30 years and to serve the growing demand for natural resources and minerals, particularly from Asia.

While circumstances differ across the continent, much of Africa lags behind the rest of the world in supplying reliable access to electricity, potable water, sanitation, and transport, the most fundamental foundations for functioning living conditions, economies, and businesses. Africa's poor infrastructure constrains economic growth by 2% every year while reducing productivity by as much as 40%.

As African countries struggle to meet their development agendas, progress is made even harder by the global climate crisis. Avoiding or mitigating further climate change impacts demands that we reduce the greenhouse gas emissions that have been the side effect of industrial development and its associated social and economic progress.

The African continent is disproportionately affected by climate change, enduring higher average temperatures, more extreme weather events, and worse effects from rising sea levels than much of the rest of the world. The continent is currently losing an estimated 15% of its annual gross domestic product to climate change and its related impacts. The worst of these physical and economic effects will most likely be borne by Africa's poor and marginalized communities, particularly women.

Africa Needs Energy

Access to energy is an essential factor for positive social and economic development in developing countries. A 2023 United Nations special issue report on access to energy in sub-Saharan Africa shows the connections between reliable, quality energy access and industrialization, increased productivity, and economic growth.

Lack of access, or 'energy poverty', reinforces the continent's economic poverty. The lack of access to clean cooking fuels and technology disproportionately affects women and girls who are exposed to household air pollution that has caused 700,000 deaths in Africa since 2019. Africa's poorest people are paying among the world's highest prices for energy. Reliable access to quality energy supply is essential to achieving the United Nations Sustainable Development Goals (SDGs).

Globally, access to electricity has been increasing in recent decades. Where two in 10 people lacked access to electricity in 2000, this share dropped to less than one in 10 by 2020. Despite this positive trend, there are still countries where most of the people do not have access to electricity. And many of these countries are in Africa. While countries such as Ghana, Kenya and Rwanda are on track for full access by 2030, 600 million people, or 43% of the total African population, lack access to electricity. Most of these are in sub-Saharan Africa.

Mitigation Versus Adaptation



Mitigation:

Limiting the amount of heat-trapping greenhouse gases being released into the atmosphere. For example, reducing the burning of fossil fuels associated with power generation, transport, and industry.

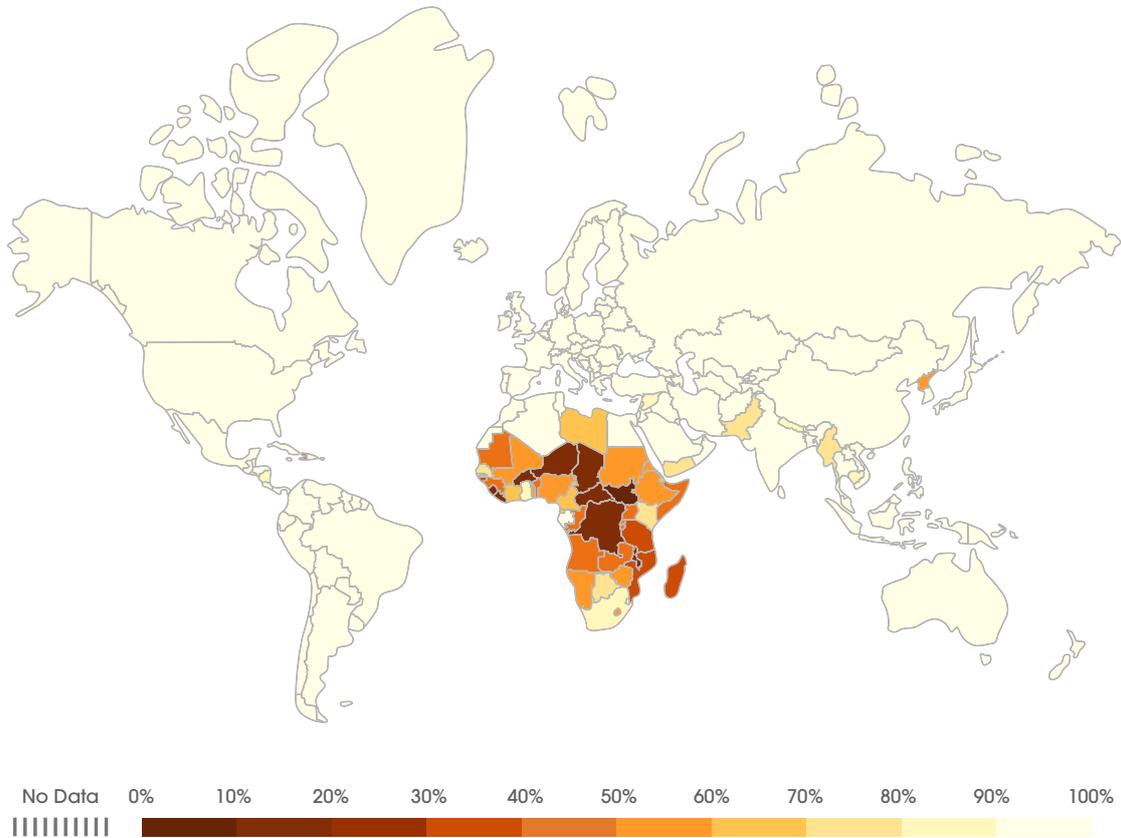


Adaptation:

Actions that allow us to adjust to inevitable future climate changes. The unwitting release of greenhouse gases has locked the planet into a degree of climate change that cannot be mitigated. Adaptation aims to reduce the risks we face, such as food insecurity, extreme weather events, and rising sea levels by adjusting how we do things such as farming or building infrastructure.

Share of the population with access to electricity, 2020

Having access to electricity is defined in international statistics as having an electricity source that can provide very basic lighting, and charge a phone or power a radio for 4 hours per day.



Source: OurWorldInData (Compiled from multiple World Bank sources)

Lack of access to electricity means that more than half of the continent's population has to resort to burning biomass in the

form of firewood and charcoal. These are economically inefficient, unhealthy, and environmentally problematic.

Energy Versus Electricity

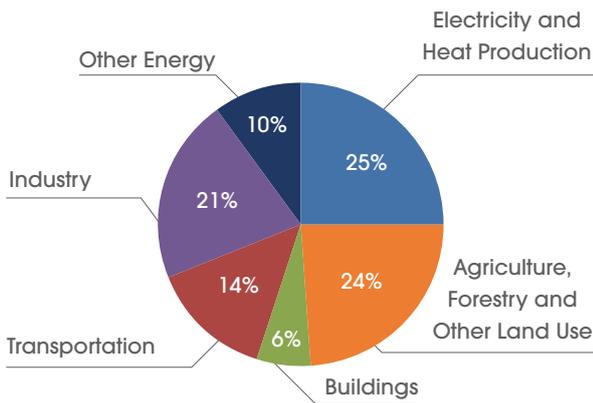
Politicians, climate change activists, and journalists working in the climate change space sometimes make the mistake of using the terms 'energy' and 'electricity' interchangeably. It is important to be aware of this to avoid confusion and communicate information correctly.

Scientifically, 'energy' is a more general term for the capacity to do work, harnessing light, heat, and movement from physical and/or chemical resources. Energy cannot be created but only transformed from one source to another. In climate change, energy refers to all the ways in which we might generate different forms of energy, such as electricity or fuel. Fossil fuels (coal, oil and gas) and renewable energy (sunlight, wind, geothermal and hydro) are all forms of energy that can be turned into forms of energy we can use, such as electricity or fuel.

How development has driven climate change

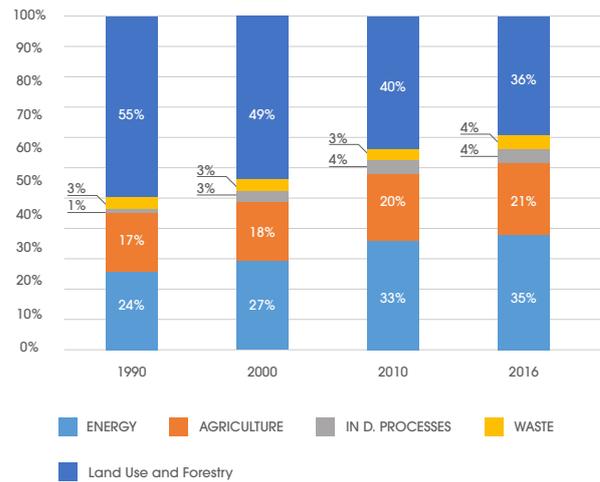
Human progress through industrialization is at the center of the climate crisis. While manufacturing, transport, agriculture, and construction are all contributors to the greenhouse gas (GHG) emissions causing global warming, the main culprit is the

production of electricity from burning fossil fuels such as coal, oil, and gas. The carbon dioxide, nitrous oxide, and methane released trap the sun's heat in the atmosphere creating a greenhouse effect that warms the Earth beyond the planet's ability to self-regulate.



Global Greenhouse Gas Emissions by Economic Sector

Source: United States Environmental Protection Agency



Evolution of Africa's GHG emissions by sector

The continent's responsibility for historical climate change is negligible and even now, African nations are only responsible for just under four percent of global GHGs. However, if Africa were to exploit fossil fuels in the same way that the rest of the world has, the consequences for global climate change would be catastrophic.

African nations face hard choices. They can exploit their abundant fossil fuel resources for the sake of social development, or they can 'strand' or leave these assets in the ground and find other ways to develop.

The Natural Gas for Africa Debate

Many African leaders maintain that fossil fuels, particularly natural gas, are key components in the energy mix. Natural gas exploitation is touted as a way to promote Africa's energy access and development while delivering investment and revenue, with several states planning to increase production, expand existing gas infrastructure and start new projects.

- ▶ Africa produces 8% of global gas output.
- ▶ 40% of global gas reserves discovered between 2010 and 2020 were in Africa.
- ▶ The continent's gas reserves are primarily concentrated in five countries; Nigeria (32%), Algeria (25%), Mozambique (15%), Egypt (12%), and Libya (8%)

Arguments in favor of exploiting natural gas in Africa:

- ▶ Gas is considered less carbon-intensive than coal and oil and could reduce emissions if substituted for these fuels.
- ▶ Gas could serve as a 'bridge' fuel to reduce carbon emissions while renewable energy technologies are developed and scaled up.
- ▶ Gas could be used as a backup for intermittent renewable energy sources like wind and solar, helping to ensure a stable and reliable supply of electricity.

Arguments against exploiting natural gas in Africa:

- ▶ Gas is a carbon-emitting fossil fuel.
- ▶ Carbon is released throughout the supply chain, e.g. flaring.
- ▶ Gas production is energy intensive.
- ▶ Methane leakage occurs throughout the gas supply chain. Methane is a primary driver of climate change, 25 times more potent than carbon dioxide.
- ▶ Renewable energy alternatives are rapidly becoming cheaper and more accessible than gas.
- ▶ Most of Africa's gas projects are export-oriented and operated by multinational companies. They are more likely to benefit a small group of global energy elites at the expense of African communities.

Although gas may previously have been viewed as a transition fuel in the shift to greener economies, the cost and accessibility of RE technologies have been reduced such that renewables may provide Africa with a more affordable option compared with fossil-fuel-powered alternatives. As green hydrogen technology begins to show strong potential for Africa to leapfrog fossil fuels, continued justifications for fossil exploitation on the continent make little sense.

Climate activists have been questioning whether the ambivalence of African leaders when it comes to taking decisive action on climate change is a sign of the influence of the fossil fuel lobby.

The fossil fuel lobby's power is well established, but the extent of its influence was highlighted with the release of a report by human rights groups in 2022. The report showed that 636 fossil fuel lobbyists, affiliated with the world's largest public and private oil and gas companies, were registered to attend the United Nations Framework Convention on Climate Change (UNFCCC) negotiations in Egypt that year as part of 29 countries' national delegations, an increase of 25% from the previous event in Glasgow. In 2023 that number rose to 2 456.

While national delegations usually include industry association representatives and advocacy groups, the increasing fossil fuel representation among countries that have shown resistance to climate change commitments tells its own story. Fossil fuel lobbyists had more passes to the 2023 international climate change negotiations than the combined total of delegates from the countries most vulnerable to climate change; Somalia, Chad, Tonga, Solomon Islands and Sudan.

Towards Clean Energy Futures for Africa

Renewable energy (RE) sources such as solar, wind, geothermal and hydropower are gaining ground and Africa is already part of changing the global energy industry. Transitioning away from fossil fuels and embracing a renewables-based energy system promises meaningful economic,

employment and welfare gains across the continent's regions.

Africa's limited infrastructure and vulnerability to climate change make a strong economic case not only for transitioning to economies built on RE but also for investing in climate-

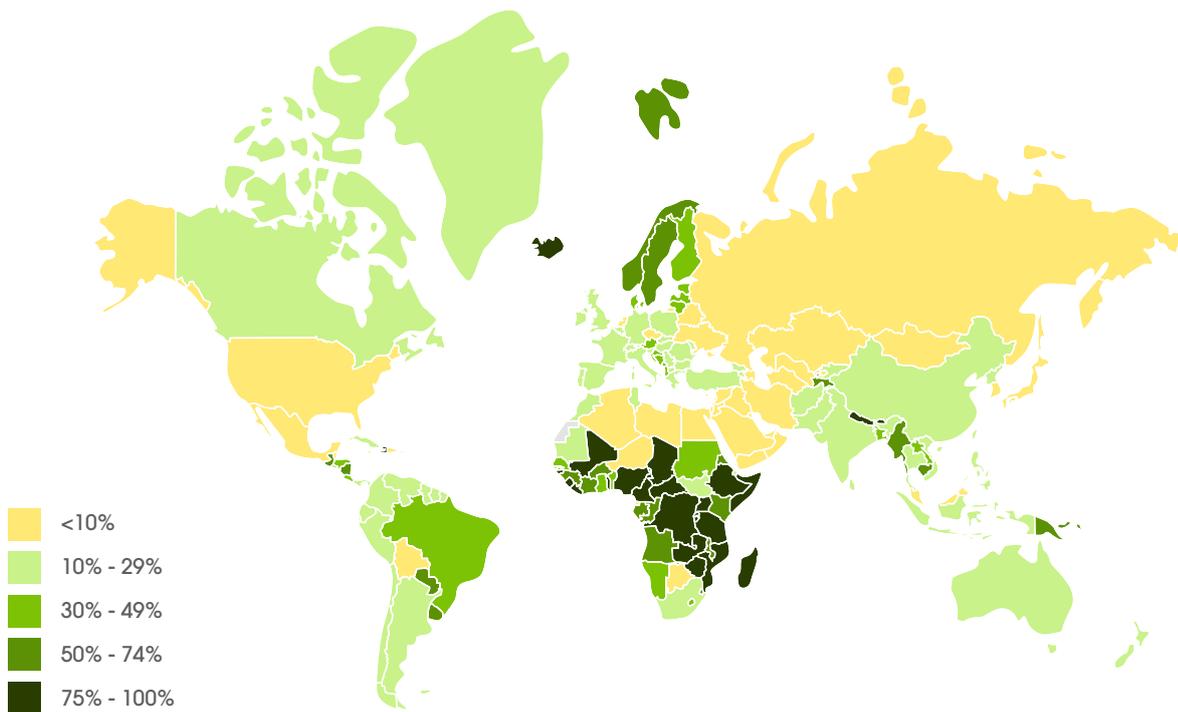
resilient infrastructure. Developing climate-resilient infrastructure will help African nations adapt to the inevitable effects of climate change already affecting communities across the continent. According to the Global Commission on Adaptation, every \$1 invested in making new infrastructure climate change resilient could yield five times that amount in benefits.

Since most African countries lack the extensive fossil fuel infrastructure that has long been established in Europe and North America, they are well positioned to ‘leapfrog’ fossil-fuel-based economies to economies built on RE.

Africa also has the advantage of abundant RE potential in the form of wind, solar,

geothermal and hydropower resources. In addition, the falling costs of RE are making the technology increasingly more viable for grid extensions, mini-grids and stand-alone applications.

Renewables-based generation capacity on the continent has increased 7% from 2010 to 2020. This has been driven primarily by individual countries’ large-scale projects, particularly hydropower and solar photovoltaic projects. Southern Africa led around a third of Africa’s total renewable generation capacity in 2020 with 17 gigawatts (GW), followed by North Africa with 12.6 GW.



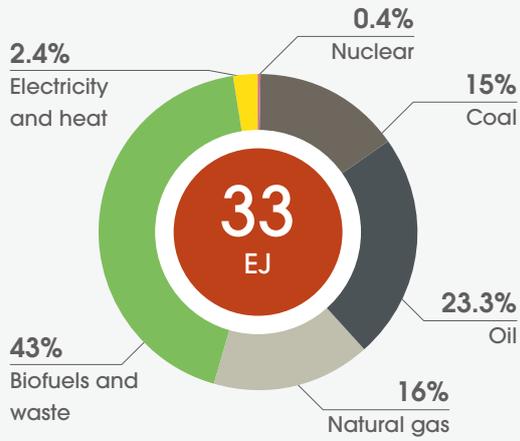
Renewable Energy as a Share of Total Final Energy Consumption in 2019

Source: United Nations Energy Statistics Pocketbook 2022

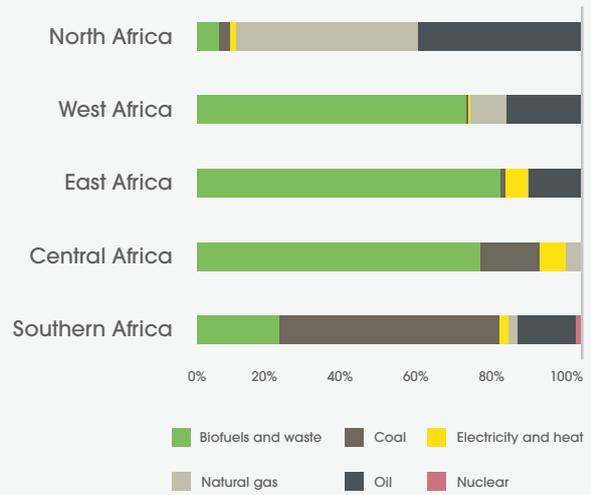
Despite being feasible and essential, the profound energy transition that is required has yet to take place. Africa may have good RE potential, but solar, wind, geothermal and modern bioenergy still contribute only

marginally to the continent’s energy mix. Africa accounts for less than three percent of the world’s installed renewables-based electricity generation capacity.

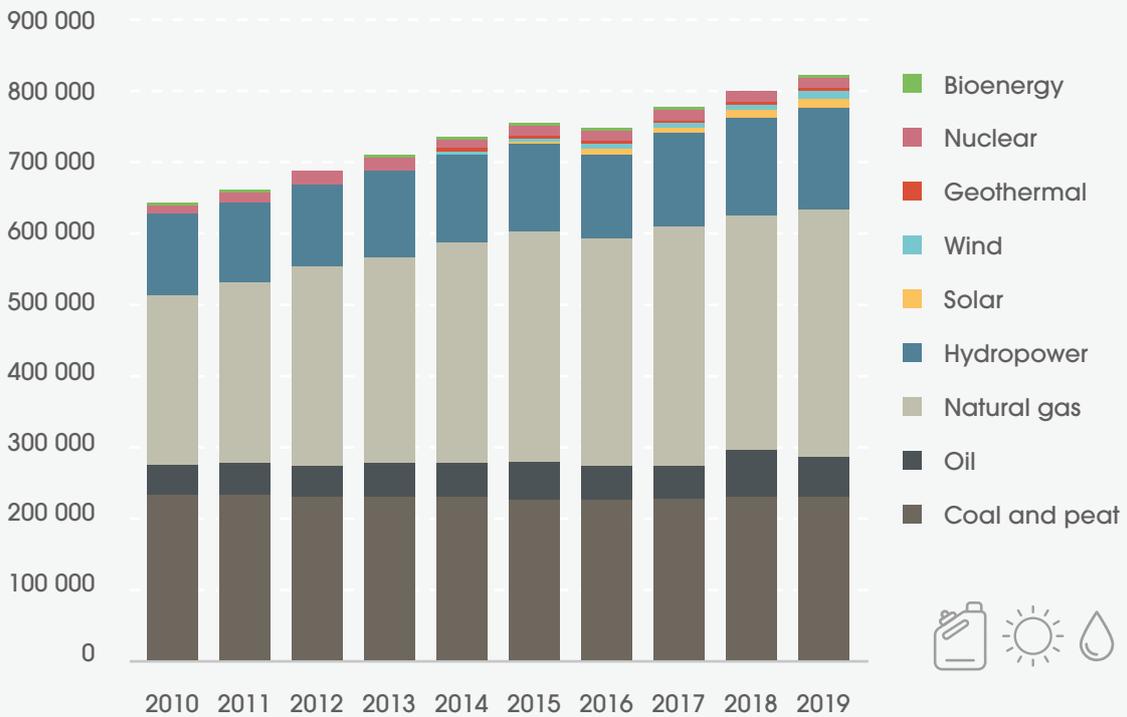
Total primary energy supply in Africa, by source, 2018



Total primary energy supply in Africa regions, by source, 2018



Source: Total primary energy supply in Africa and its regions, by source, 2018 Source: UNSD, 2018.



Electricity generation mix in Africa, by source, 2010 - 2019

Source: IRENA, 2021a



African students viewing Olkaria 280 MW geothermal energy plant Hell's Gate Rift Valley Kenya.

Source: Mark Boulton / Alamy Stock Photo



View of the Kariba hydroelectric dam in the Kariba gorge of the Zambezi River between Zimbabwe and Zambia in southern Africa. The dam forms Lake Kariba, the world's largest man-made lake.

Source: Eyal Bartov / Alamy Stock Photo



African farmer standing and holding digital tablet on corn farm with solar cell and wind turbine in background

Source: Prajuab Chaipimpa / Alamy Stock Photo



Wind Turbines silhouetted at sunset at Klipheuvell wind farm

Source: AfriPics.com / Alamy Stock Photo



KENYA, Lodwar, energy transition, NAPUU drip irrigation scheme by the county government, the water is pumped by solar powered pump

Source: Joerg Boethling / Alamy Stock Photo



Solar panel row on solar farm in the Karoo of South-Africa

Africa in Transition

Globally, the energy transition is far behind where it needs to be. According to the World Energy Transitions Outlook 2023, huge gaps remain between the rollout of necessary energy transition technologies and the levels needed to limit global warming at °1.5C above pre-industrial levels. This was the science-based limit agreed under the UNFCCC Paris Agreement. It dictates that carbon dioxide emissions need to be cut by about 37 gigatons (Gt) from 2022 levels and net-zero emissions need to be achieved from the energy sector by 2050.

Achieving this would require a complete transformation of the way we produce and consume energy. African nations are better positioned than most to disrupt historical systems and provide clean and affordable energy to the millions of Africans who need it.

IRENA has called for a comprehensive policy-making approach to Africa's energy transition. Such an approach would need "strategic vision, a broad policy framework, financial resources on a large scale and institutional capacities to carry out the strategy". The organization highlights the importance of building broader public awareness and including diverse communities and stakeholders in the process.

The suggested 'African Green Deal' would see each country make the most of its advantages to create cross-border cooperation, joint strategic objectives and knowledge sharing to achieve common interests.



Source: IRENA

Hope for Green Hydrogen

What would help Africa to contribute to the global energy transition and meet its social development needs would be viable green alternative energy options.

One such possibility is green hydrogen. Already widely used in many industrial processes, hydrogen is a highly efficient fuel, releasing nearly three times the energy density of petroleum products.

Efficient as it is, hydrogen production requires substantial power to produce. Hydrogen's color designation is defined by the source of power that produces it. Black or brown hydrogen is produced from coal, grey or blue hydrogen from methane and pink hydrogen from nuclear. Green hydrogen is derived from renewable sources such as solar, wind and geothermal. Since Africa has an abundance of these, African countries may have some advantage over developed nations in the race to capitalize on the technology.

The main benefit of green hydrogen production for African countries would be its ability to store excess energy, resolving the problem of intermittent supply from renewables such as solar and wind. Green hydrogen would enable stable power grids while delivering usable energy that does not contribute to climate change and has the potential for export.

The technology is rapidly gaining traction and attracting funding as a means to accelerate Africa's electricity access. Namibia's \$10 billion green hydrogen project will produce 3GW annually for regional and global markets by 2027. In June 2023, South Africa announced the intended launch of the SA-H2 Fund geared towards accelerating the country's green hydrogen sector. Other African countries working on integrating green hydrogen into their energy portfolios include Kenya, Morocco and Nigeria.



The Bottom Line:

Africa remains hampered by energy poverty despite its rich mineral and energy resources. Fossil fuel reliance persists and insufficient infrastructure, limited financing, and political instability hinder the transition to economies built on renewable energy. As the climate crisis accelerates, African nations are under pressure to pursue development that also responds to climate resilience and potentially embrace new technologies to achieve this.



Coverage of Africa's Just Transition and Climate Change Issues - A Newsroom Perspective

One of the biggest hindrances to telling energy and climate change stories in African newsrooms is the lack of capacity.

Nairobi editor Mary Mwendwa says that many journalists, and even some editors, lack adequate skills to tackle such topics. Since journalists may join newsrooms without specialization in specific areas, they may not have the ability to effectively cover complex topics such as climate change.

In addition, newsrooms may rely on non-governmental organizations to facilitate and fund journalists' coverage of energy and climate stories. This can unintentionally and intentionally compel journalists to write stories that reflect the organization's positioning.

Mwendwa spoke with Njenga Hakeenah about how capacity, knowledge, and funding constraints might limit climate and energy reporting and affect the quality of climate change journalism.

NJENGA HAKEENAH: How do all these issues affect energy security or insecurity caused by climate change?

MARY: Limited capacity and resource gaps in newsrooms mean that fewer stories will be told. Similarly, in-depth stories will be lacking to help inform policy. Policy interventions around climate financing are critical and if a journalist does not understand the topic, it will be difficult for them to cover it.

NJENGA: What are the challenges with finding and interviewing African voices in climate change in energy?

MARY: As an editor at TalkAfrica, I find that journalists struggle with finding experts locally who work in climate and energy. Many have protocols to be followed and also, at times, are just stubborn and do not want to talk to journalists. Experts from the government have to get cleared by their communications department and this bureaucracy takes time.

NJENGA: Are there dedicated desks and reporters for telling energy and climate change stories?

MARY: We are now seeing newsrooms start to dedicate desks for climate reporting. However, this does not apply to all newsrooms since it is at a time when convergence has become the norm due to reduced budgets and other financial constraints.

NJENGA: Are climate change stories technical to tell, locking out journalists from this field?

MARY: We are now seeing newsrooms start to dedicate desks for climate reporting. However, this does not apply to all newsrooms since it is at a time when convergence has become the norm due to reduced budgets and other financial constraints.

NJENGA: What can be done to improve African journalists' news coverage of energy security under climate change?

MARY: Regular training for journalists in this area, and the training needs to have experts and journalists who have covered the beat for some time and understand it. Newsrooms to allocate resources to the coverage of climate change and energy issues. Grants and fellowships can also help to boost coverage in energy and climate change stories.

Reporting Guide: Resources for African Journalists

Resources focused specifically on African Energy issues that will help you to improve your reporting on the subject.

Who to Follow



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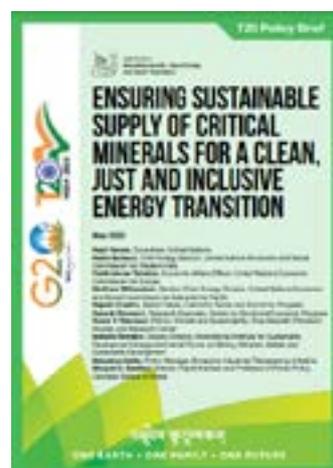
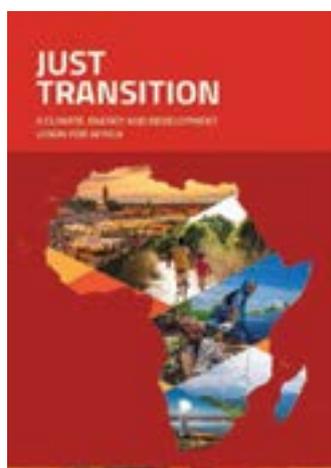


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Book Recommendations



Helpful Resources:

Energy Access and Transitions

The African Climate Foundation (ACF)'s Energy Access and Just Transitions Program aims to accelerate and scale clean energy technologies to achieve energy security in Africa and leverage associated industrialization benefits at a country and regional level.

It focuses on Coal, Oil and Gas, Renewable Energy and Green Hydrogen.

Click here to access the Resources: <https://bit.ly/3TyuiMx>



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