

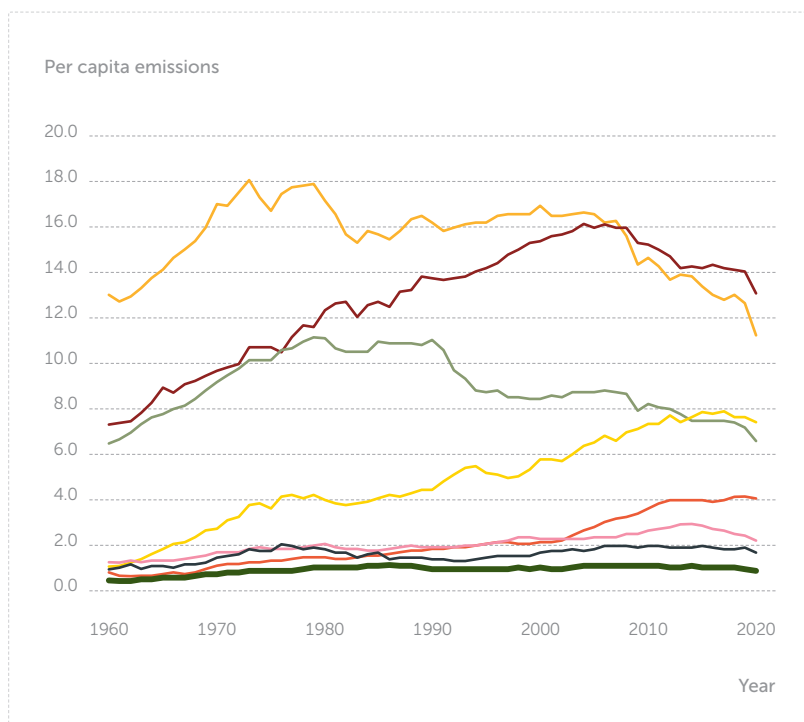
The human face of the climate crisis in Africa

Least responsible,
Most vulnerable

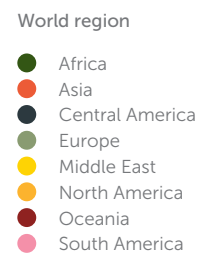
2 Least responsible, Most vulnerable: the human face of the climate crisis in Africa

Since the 1800s human activities such as the burning of fossil fuels and rapid industrialisation have contributed massively to climate change. However, not all countries have equal roles in propagating climate change and often the least responsible countries are the most affected. This is particularly visible in Africa. Compared to Africa, Asia, Europe and North America have each emitted over eight times as much carbon in the period between 1960 and 2020. In 2020, a person living in Oceania or North America on average accounted for ten times the emissions of someone living in Africa. In 2019, over one-quarter of Africa's carbon emissions served consumers overseas.

World regions: territorial carbon emissions (1960-2020)



Africa has registered the lowest per capita emissions of any world region every year since 1960

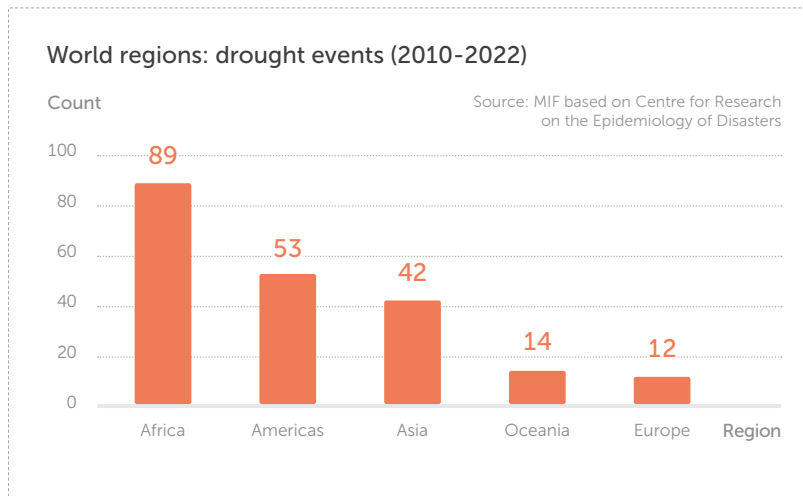


Source: MIF based on Global Carbon Atlas

Africa is a hotbed for climate vulnerability, and over the last few years, it has faced extreme droughts and flood events that have affected the most vulnerable communities in the world. Often these are the communities that rely so heavily on climate stability, such as women, smallholder farmers and pastoralists. Each of these key societal groups in Africa face nuanced vulnerabilities, with climate change exacerbating some of their existing problems.

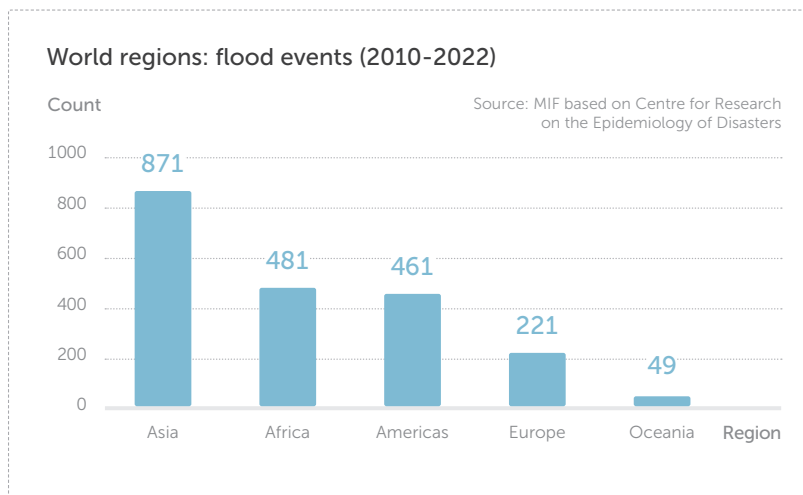
In a period when Africa is meant to be rising and enjoying unprecedented economic development, the threat of climate change is no longer looming it is here. It is evident in the shorter rainy seasons and the longer dry spells, from the drowned crops from floods to the unbearable heat felt in urban informal settlements and those escaping rural droughts. The next few decades will be make or break for Africa and this is largely dependent on the international community's adherence to the goals of the Paris Agreement and commitment to climate adaptation finance for developing countries.

Africa is the region most impacted by droughts and second most impacted by floods globally



In recent months, Somalia has experienced large-scale droughts worsening food insecurity in 2022. The latest figures show 7.8 million people affected, with 1.1 million people displaced. As of May 2022, Niger has also faced droughts affecting 4 million households due to consecutive failed rainy seasons as well as increasing desertification of the Sahel. Similarly, in Somalia, this had led to displacements as well as increasing food security. In places that already have issues with poverty, communities are left further vulnerable and dependent on governments and international aid.

Since 2010, Africa has seen almost as many droughts as the Americas and Asia combined



Africa is second in world flood events, only behind Asia. In recent months flood events have ravaged West and Central Africa. As of August 2022, there have been 731,000 affected in a total of 17 countries. A further 126,000 have been displaced in total, with DR Congo having the most people displaced (43,000).

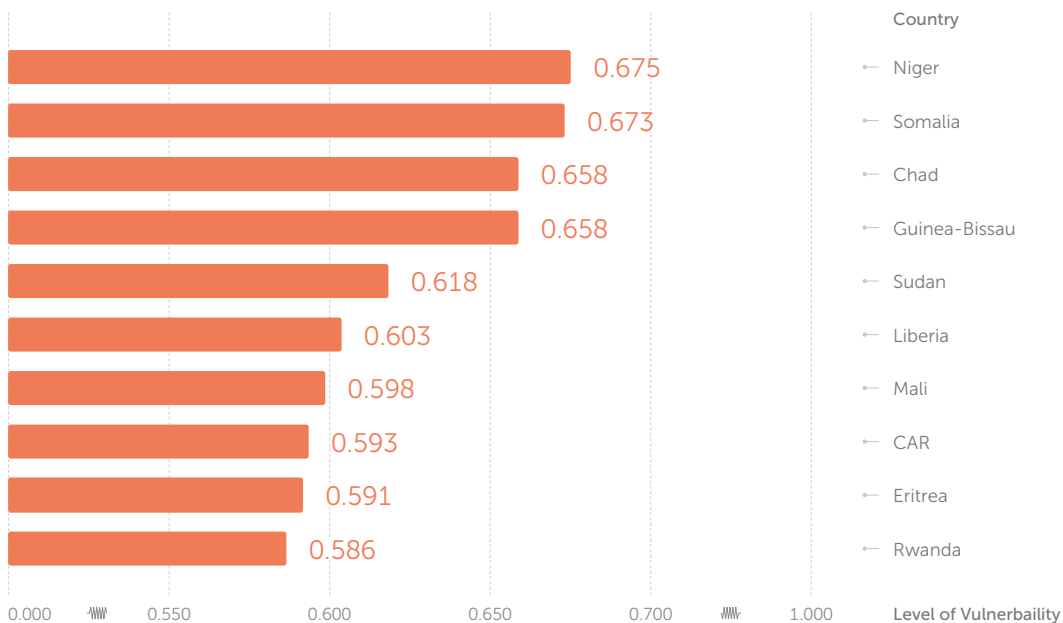
In the same period, widespread heavy rains have affected 38,000 people in Mauritania. In addition, houses and crops have been destroyed leaving farmers and rural communities further vulnerable to food insecurity and homelessness.

In late July 2022, The Gambia experienced the highest amount of rainfall in 34 years, with over 5,000 people displaced.

In Africa, the number of people affected by floods over 2010-2022 amounted to at least 43.0 million

Africa is showing the highest climate change vulnerability with the ten most vulnerable countries being all African, including Central African Republic, Chad, Eritrea, Guinea-Bissau, Liberia, Mali, Niger, Rwanda, Somalia and Sudan. Niger is ranked as the most climate-vulnerable country according to the Global Vulnerability Index.

Most vulnerable countries: ND-GAIN Vulnerability to climate change score (2020)



Source: MIF based on Notre Dame Global Adaptation Initiative

In recent months Niger has faced severe droughts. This is especially worrying considering that 80% of Niger's population depends on agriculture. Small-scale farmers rely so heavily on climate stability for their livelihoods in a time of increasing climate variability due to extreme weather events and slow onset climate events.

The danger of slow onset challenges

'Slow onset' events constitute gradual effects of the long-term shifts in temperatures and weather patterns known as climate change. These range from desertification to ocean acidification, through sea level rise, land and forest degradation, salinisation, biodiversity loss and glacial retreat.

All phenomena are present in Africa and are bound to render areas uninhabitable and reduce the opportunities to earn a living and find food and water.

There is an ongoing tension between 'slow onset climate events' and 'extreme weather-related events'. Understandably, extreme weather events are a key priority for governments, given they pose a real and immediate threat to life and property. However, 'slow onset events' have the potential to create long-lasting damage to livelihoods, economies and ecosystems. The framing of 'slow onset events' as gradual and anticipated generates little interest from the public and governments.

The overarching observation of many studies is that low-income countries often lack the institutional, financial, or technological capacity needed to respond to slow onset events. This can notably be seen in the lack of adaptation measures in Africa, such as early warning systems. Furthermore, Africa has only one-eighth of the minimum density of weather stations recommended.

In contrast with extreme weather events, addressing losses and damages caused by slow-onset processes is still neglected in the climate change context, both at the national and international levels. Scientists conclude that in the long term, more people will be affected by slow-onset processes than by extreme weather events. Slow onset climate phenomena are likely to increase vulnerabilities in the future.

Rising number of climate related displacements

Climate change is both a direct and an indirect driver of displacement. The slow onset effects of climate change are contributing to displacement by making areas uninhabitable or through their impact on socioeconomic factors such as the loss of land and livelihoods or water and food scarcity. In addition, climate change is increasing the frequency and intensity of natural disasters. The intensity of climate change effects, the level of exposure and vulnerability are decisive factors that trigger displacement.

By 2030, 108–116 million people in Africa will be exposed to sea level rise (compared to 54 million in 2000), increasing to 190–245 million by 2060. Data shows that between 2012 and 2021 there were over 20 million flood-related internal displacements in Africa. While between 2017 and 2021 there were over 2 million drought-related internal displacements.

According to the IPCC, by 2030 up to 250 million people may experience high water stress in Africa, with up to 700 million people displaced as a result.

- Angola is at present experiencing the fifth consecutive year of devastating droughts, described by the World Food Programme as the worst to hit the country in 40 years. This has forced thousands to flee to neighbouring countries such as Namibia.
- The Horn of Africa (Ethiopia, Kenya and Somalia) is facing its worst drought in 40 years, which has internally displaced thousands.
- In Somalia, droughts have continually displaced hundreds of thousands of people. In 2011 over 450,000; between 2016 and 2017, over 940,000 and as of 2022 over 240,000 have been displaced already.
- Madagascar is experiencing one of its worst droughts on record, with 1.64 million facing extreme hunger in the early months of 2022. While a twin tropical cyclone displaced 178,000.

Narrowing displacements down to a single event is proving more difficult, as there are a multitude of underlying factors that lead to people leaving their homes. For instance, droughts leading to food insecurity can lead to violence and war. Additionally, in some cases people often return to their farmlands once rain returns, temporarily leaving their homes for better opportunities during the dry seasons. However, longer dry seasons and short rainy seasons leave individuals further vulnerable as they have less time in the year to cultivate on their lands.

Rural-Urban migration is more commonplace

Often those who are forced to leave their homes due to climate-related events move to urban areas, likely staying in informal settlements due to the lack of affordable housing available. Also, the prospect of those working in agriculture returning home given ideal weather conditions is another prompt to stay in informal settlements.

Urbanisation has increased as a result of shorter rainfall periods which have crippled rural livelihoods.

The Sendai Framework for Disaster Risk Reduction, a climate resilience strategy adopted in 2015, acknowledges unplanned and rapid urbanisation as an underlying disaster risk driver.

Around 55% of the urban population in sub-Saharan Africa lived in slums in 2014. These informal settlements are often located in areas exposed to the effects of climate change and variability, such as floods, landslides, sea level rise, storm surges or overflowing rivers, which exacerbate pre-existing vulnerabilities. They are the most vulnerable to such events with limited adaptive capacity and are not well equipped to resist exposure to climate events; for example, they lack adequate insulation for dealing with increasing heat in cities.

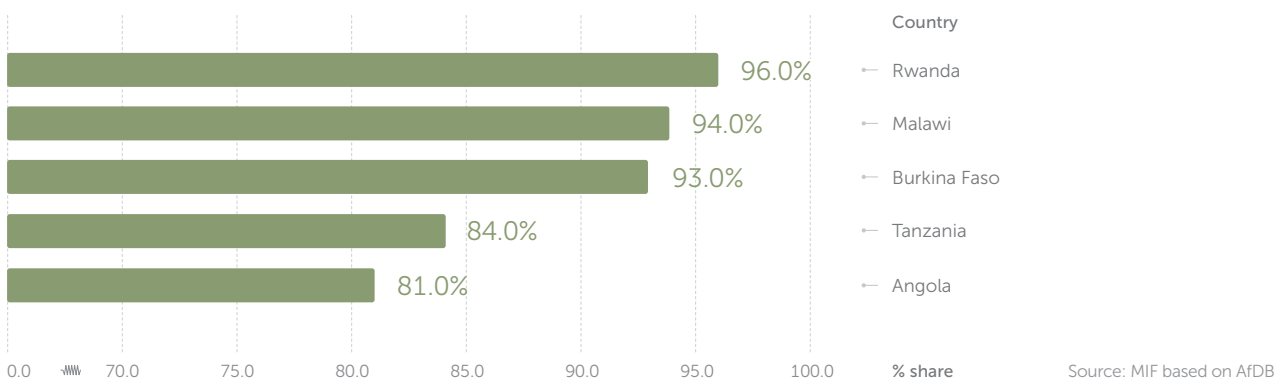
About 70% of African cities are highly vulnerable to climate shocks, with small and medium-sized towns and cities most at risk. For instance, with 55 million people living in Africa's largest coastal cities, there is an increased threat given low elevation zones. This further amplifies the importance of adaptive capacity measures to avoid catastrophic damage and threat to life.

Climate change is a gender issue

Climate Change is likely to exacerbate existing gender issues, including in education, jobs and social standing. Women with higher dependency on climate-sensitive sectors, in higher levels of poverty and with little access to information are particularly vulnerable to the impact of climate change. This is especially true for women in Africa employed in the agriculture sector.

In Somalia, the drought has led hundreds of thousands of people to move from rural to urban areas to find food, clean water, shelter and healthcare

Africa: share of economically active women in agriculture



Women play a huge part in African agriculture; According to the African Development Bank, 62% of economically active women in Africa work in agriculture. This makes agriculture the largest employer of women in

Africa. Countries like Rwanda, Malawi and Burkina Faso have over 90% of economically active women working in this sector.

Women's time is closely connected to their prospects, whether in agricultural activities, schooling activities and social activities. Increasingly women's activities are being impacted by climate change, in particular water scarcity.

Fetching water is an activity that is usually carried out by women as it is closely related to household chores such as cooking and cleaning.

- UN reports that 11.6 million people in Ethiopia, Kenya and Somalia don't have sufficient access to safe water

Clean water closer to home is critical for women and girls. Walking long distances away from home can be dangerous for girls, as well time-consuming. They are more vulnerable to attacks while limiting the time dedicated to education or schooling activities. As water scarcity becomes more of an issue due to climate change, women and girls will be expected to walk longer distances, exacerbating already challenging circumstances.

- 1 in 3 people in Africa are impacted by water scarcity
- 411 million people still lack basic drinking water in Africa

Smallholder farmers are the future of African food security, but their future is not secure

In Africa, there are around 33 million smallholder farms, and the farmers that live on them contribute up to 70% of the food supply to the continent. Around 80% of the farmland in sub-Saharan Africa is managed by smallholder farmers.

Smallholder agriculture has the potential for many countries to increase food production and reduce poverty. However, low production is a key challenge many smallholders farmers face, due to the lack of equipment, high-quality seeds and skills. Climate change is exacerbating and compounding these pre-existing challenges while also bringing new ones.

- Climate change is contributing to a lack of water, soil erosion, drought and flooding.
- Climate change is shrinking crop yields, and productivity growth has already been reduced by 34% since 1961.
- Predictions on yield reduction show a drop of up to 50%, while crop revenue is forecast to fall by as much as 90% by 2100.

Africa's food production issue will require consistency which is difficult in a time of unpredictable climate-related weather patterns such as drought and floods.

Additionally, the future of smallholder agriculture and farming is at risk with many rural youths in Africa opting to move to urban areas in search of better livelihoods due to their negative perceptions around farming. This will leave Africa further dependent on global food supplies and thus net importers rather than net exporters.

Pastoralists facing uncertainty in unprecedented times

Equally, pastoral communities across Africa have been impacted by climate change effects. The pastoral population in Africa is estimated at 268 million, living on an area representing about 43% of the continent's total land mass.



**In Sub-Saharan Africa
29% of the population's
drinking water is 30
minutes away**

Lifestyles and livelihoods of pastoralists have been disrupted by climate disasters exacerbating animal disease, limited access to water, lack of grazing land. In addition, inefficient warning systems have left pastoralists in the Horn of Africa vulnerable.


- Livestock sector is integral to the economy of Somalia, providing food and income to over 60% of the country's population. Dry pastures coupled with severe water shortages have decimated livestock, directly impacting the livelihoods of Somali pastoral communities.

Climate change is considered a threat multiplier for conflict and instability. In countries marred by high levels of violence, many events are taking place in areas where there is large competition for water resources.

These events illustrate the complex nexus between climate change and conflict. The table below shows that some of the most climate-vulnerable countries have the highest numbers of violent events per year (2010 -2022).

Most climate-vulnerable countries average violence events per year (2010-2022)

Country	Average violence events per year
Niger	188
Somalia	2480
Chad	83
Guinea-Bissau	11
Sudan	1095
Liberia	59
Mali	552
Central African Republic	444
Eritrea	6
Rwanda	31



In Egypt, Burkina Faso and Sudan over 60% of violent events happened in provinces suffering from extremely high-water stress

Source: MIF based on ACLED, Notre Dame Global Adaptation Initiative

Africa's adaptation cost is dependent on global mitigation efforts

Unless the emissions gap is closed, warming limited to below 2°C, Africa's adaptation challenge will be much larger and the cost much greater. Research shows that even if the emissions gap is closed by 2050, Africa will still face many climate challenges due to residual damage.

Climate change modelling uses a range of emission scenarios to identify possible changes in climate features such as temperature, precipitation, extreme weather events, ocean acidification and sea level rise. The estimated costs for adaptation in a high emissions scenario is around \$45-70 billion per year by 2040s, while a below 2°C scenario amounts to \$35 billion per year.

- Agricultural and fisher productivity is likely to fall due to climatic conditions
- More frequent extreme weather events such as droughts, floods and heatwaves
- With a 3°C warming, present cropping areas for maize, millet and sorghum could become unviable

The success of Africa's adaptation efforts will likely depend on its access to global funding and the global pledge to stay on the below 2°C pathway.

Post pandemic climate adaptation finance declining

Despite an increase of international adaptation finance to developing countries up to 2019, research shows that adaptation financial flows have slowed because of the COVID-19 pandemic. While the costs of the adaptation finance needs would be much lower if the Paris Agreement goals were met, the pandemic has shown the fragility of financial pledges to low-income countries. With studies showing climate change could lead to more intense and frequent epidemics such as Covid -19, this leaves climate financing for poorer countries susceptible to diversion.

Conclusion

It is clear Africa is a hotbed for climate vulnerability, with continuous drought and flood events affecting those most dependent on the climate for their livelihoods, such as women, smallholder farmers and pastoralists.

Unfortunately, it does not look much better when looking at the future - that is, if the world does not adhere to the Paris Agreement goals of staying below 2°C warming.

This effectively leaves the future of African climate stability in the hands of not just Africans but the world.

The next few decades will be "make or break" for Africa as we reach the eventual verdict of the Paris Agreement. As the region with the youngest generation, climate change will not be the only challenge that Africa faces. The future of Africa's agricultural productivity faces uncertainty as the young people are drawn to the cities leaving with them farming traditions going back centuries. Given Africa's current net importer of food status this is likely to exacerbate the issue.

Africa must also focus on each societal groups nuanced experiences of climate change to establish appropriate adaptation measures, keeping in mind that climate justice is based on acknowledging the disproportionality of the climate crisis.

Lastly, adaptation is an important step to tackle Africa's climate vulnerability and therefore must be a priority in every regard. However, access to finance remains uncertain despite international pledges especially in the post-pandemic world. This must be addressed at COP27.

The precariousness of the African climate struggle leaves one with many questions. Can Africa rely on pledges for adaptation finance from the international community? How vulnerable is African agriculture, even if warming is kept to below 2 degrees? How will African governments address the challenges of vulnerable groups such as women, rural people and youth? What should Africa do if the international community fails to adhere to the Paris Agreement?

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