



# SAHEL REGION

**The Sahelian countries are among the poorest countries in the world with the most degraded environments. They are also among the countries that are the most vulnerable to the estimated effects of climate change.**

**Countries:** from west to east – parts of northern Senegal, southern Mauritania, central Mali, northern Burkina Faso, the extreme south of Algeria, Niger, the extreme north of Nigeria, Cameroon and Central African Republic, central Chad, central and southern Sudan, the extreme north of South Sudan, Eritrea and Ethiopia.

**Surface area:** 3,053,200 km<sup>2</sup>

**Population:** close to 135 million (2014)

**Climate:** Arid and hot climate characterised by extreme temperatures with fluctuating periods of rainfall and intense drought.

**GDP:** GDPs of countries in the Sahel region range from 2.065 billion USD (Eritrea) to 440.8 billion USD (Nigeria) (both 2021)

**Economy:** agriculture is the main economic activity, employing about 80 - 90% of the working population.

## CLIMATE CHANGE IMPACTS

- ▶ **Heatwaves** are very severe in intensity given that the mean state of the atmosphere is already hot. The eastern and central parts of the Sahel are the most affected by heatwaves in terms of duration, frequency and intensity whereas the proximity to the Atlantic Ocean attenuates extreme heat events in western Sahel.
- ▶ The Sahel is gradually becoming hotter, with some areas experiencing **increased, but erratic rainfall**.
- ▶ While predominantly man-made phenomenon, **desertification** is further exacerbated by climate change.
- ▶ The majority of people's livelihoods in the Sahel region rely on **agriculture**, pastoralism or fishing; and these livelihoods are **deeply affected by climate change**. For example, scientists predict that in Mali climate change could eventually cause a 30-40% drop in agricultural capacity. Off the coast of Senegal, **fish stocks dropped by 80%** in 2017 alone.



**Nigerian eco-feminist Oladosu Adenike is encouraging youth involvement in climate action through climate education and raising awareness on the importance of women's environmental rights. Watch her story [HERE](#).**



The UN's Office for the Coordination of Humanitarian Affairs and the International Federation of Red Cross and Red Crescent Societies released the report in advance of COP27 climate change summit in Egypt, which states: "There are clear limits beyond which people exposed to extreme heat and humidity cannot survive. /.../ On current trajectories, heatwaves could meet and exceed these physiological and social limits in the coming decades." Read more [HERE](#).



Angelina Peter from South Sudan has had to flee to a refugee camp because of severe flooding in her area. "What brought us here is the flood. Our villages were submerged in water. We arrived here without anything. All our property was washed away. This is the second time it's flooding in two years." Watch more of her story [HERE](#).



According to Aliou Ba, a Senegal-based senior policy adviser at Greenpeace Africa, the impact of climate change on local fisheries is severe. "Senegalese fishermen, like their colleagues in neighboring countries, live in a dramatic situation. /.../ Coastal and bottom erosion, which also causes the destruction of infrastructure and homes of informal fishers, is violent in Senegal and is exacerbating the many challenges that threaten artisanal fisheries." Read more on the impact of climate change and foreign fishing boats on Senegal's fisheries [HERE](#).



## CLIMATE PROJECTIONS

Severe temperature rise  
Uncertain precipitation trends  
Extreme floods and droughts  
Sea level rise



The Sahel region of Africa has been identified as a climate hot spot, and is already experiencing many of adverse effects of climate change. Such adverse effects impair the enjoyment of human rights, including the rights to health, water and sanitation, food, adequate housing, and the right to life. Read more on Human Rights, Climate Change and Migration in the Sahel [HERE](#).

## KEY CLIMATE IMPACTS

Disruption of agricultural and pastoral production

Malnutrition

Crop failure

Saline intrusion

Disproportionate harm to vulnerable rural communities, especially women and historically excluded groups

- ▶ Different models give different projections but the general consensus is that temperatures will rise **1.5 times faster than the global average** between now and 2030.
- ▶ Precipitation trends are uncertain and vary across the Sahel, with projections indicating an overall **increase in annual precipitation of up to 16 mm by 2080**. Future dry and wet periods are likely to become more extreme.
- ▶ Sea levels are expected to rise by 38 cm on the Atlantic coast and by 40 cm in the Gulf of Guinea by 2080. This threatens coastal communities and may cause saline intrusion in coastal waterways and groundwater reservoirs.
- ▶ **Heat-related mortality** is estimated to increase by a factor of 4 by 2080.
- ▶ Climate change will have an impact on crop yields. Yields of maize, millet and sorghum are projected to decline.



## CLIMATE CHANGE AND FORCED MIGRATION IN THE SAHEL REGION

Climate change is a driver of migration in the Sahel region both directly and indirectly.

- ▶ Niger and Mauritania, for example, are among the top Sahel countries with the highest share of the populations affected by natural hazard-related disasters between 2000 and 2019.
- ▶ Climate change can lead to widespread food insecurity and significant displacement within the region. In a pessimistic scenario, more than 85 million people would have to move internally in sub-Saharan Africa because of climate change.

Besides the direct consequences of climate change, such as extreme weather events, changes in the climate and the weather influence interpersonal and intercommunal relationships.

- ▶ A significant amount of migration within, into, and out of Benue State in Nigeria – where communities have experienced climate change effects – is tied to violent conflicts. Such conflicts are largely between farmers and herders, and result from land resource scarcity with climate change as a cause, however these conflicts are exacerbated by ethnic or religious difference, extreme poverty, and lack of access to economic and social rights. Conflicts between Fulani pastoralists and Hausa farmers in Nigeria's north-western states led to the movement of approximately 178,000 people in 2019.



Suffering of millions of people in Mali and the wider Sahel region is rooted in the deadly combination of conflict and the climate crisis. Caught between advancing deserts, erratic weather and violence, entire communities are being forced to leave their homes, livestock and livelihood behind. Read more on the interrelated impact of climate change and conflict on the Sahel region [HERE](#).