

# CLIMATE CHANGE IN TANZANIA

---

## GENERAL CLIMATE INFORMATION

Tanzania lies just south of the equator and on the whole enjoys a tropical climate, except in the high mountains like Mount Kilimanjaro and Mount Meru where temperatures can get below freezing, especially at night. Along the coast and in Dar es Salaam, temperatures stay quite hot and humid with heavy and reliable rainfalls, especially during the rainy season.

Climate varies greatly within Tanzania. In the highlands, temperatures range between 10° - 20° C (50° - 68°F) during cold and hot seasons respectively. The rest of the country has temperatures rarely falling below 20° C (68° F). The hottest period extends between November and February (25–31 °C / 77.0–87.8 °F) while the coldest period occurs between May and August (15–20 °C / 59–68 °F). Annual temperature is 20 °C (68.0 °F).

Tanzania has two major rainfall regimes: one is uni-modal (October–April) and the other is bi-modal (October–December and March–May). The former is experienced in southern, central and western parts of the country, and the latter is found in the north from Lake Victoria extending east to the coast. The bi-modal regime is caused by the seasonal migration of the Intertropical Convergence Zone (ITCZ)<sup>1</sup>. It migrates southwards through Tanzania in October to December, reaching the south of the country in January and February, and returning northwards in March, April, and May.

The dry season with cooler temperatures lasts from May to October.

## CLIMATE CHANGE

As estimated in 2012 Tanzania contributes to the global CO<sub>2</sub> emissions with 9.295 million metric tons per year. Compared to estimates of 7.3 in 2011 and 6.8 in 2010 this indicates a trend of increased emissions in the country. Although Tanzania has an emerging industry and vehicle fleet, the more regional or local drivers of climate change is instead largely connected to land use change. In Tanzania the overall impact of global climate change is likely to result in changing rainfall patterns and an increase in average temperature. The Northeastern highlands of the country will be severely affected as a decrease in rainfall by up to 12% is predicted by 2100. The southeaster parts are more likely to be most affected by a rise in temperature with an estimated warming from 0.5° C in 2025 up to around 4° C in 2100. These changes will impact negatively on the natural resource base, ecosystems, biodiversity as well as the economy. Furthermore the number and extension of extreme weather events such as floods and droughts are expected to increase and thus have the potential to aggravate the negative impacts of naturally occurring weather events.

---

<sup>1</sup> The **Intertropical Convergence Zone (ITCZ)** is the area encircling Earth near the Equator, where the northeast and southeast trade winds converge. By seamen, the zone is referred to as the doldrums because of its erratic weather patterns with stagnant calms and violent thunderstorms. The ITCZ appears as a band of clouds that encircle the globe near the Equator. The location of the ITCZ gradually varies with the seasons. Over land, it moves back and forth across the Equator following the Sun's zenith point at high noon. (<https://en.wikipedia.org>)

## CAUSES OF CLIMATE CHANGE

- urbanization and the destruction of natural habitats for urban sprawl
- electricity or other sources of power or utilities produced by burning oil, coal or natural gas
- an overdependence on poor maintenance of and inefficiency of automobiles
- poor or short-sided community planning and the increase of suburban areas
- cities making it difficult or impossible to walk or to ride a bike
- factory and industrial farming and its polluting runoff which kills natural habitats and its use of chemical pesticides, herbicides and fungicides
- a highly disposable lifestyle, poorly crafted and short-lived goods, wasteful personal and cultural habits
- an unhealthy dependency on chemicals from the production of plastics to cleaning supplies and to food preparation
- deforestation for building purposes, to increase unsustainable farming and/or production of paper goods or other unnecessary goods.

## EFFECTS OF CLIMATE CHANGE

- More frequent and intense droughts
- Storms and heat waves
- rising sea levels
- melting glaciers and warming oceans which can directly harm animals, destroy the places of people's livelihoods and communities
- increase of temperature and loss of water
- economic crises due to effects of climate change on the agriculture sector: the agricultural sector in Tanzania engages 80% of the labor force, which equals approximately 13.495 Mil. people providing 49% of the country's GDP.
- In 2016, Tanzania experienced the problem of getting few rains thus causing serious consequences for farmers and pastoralists. Farmers did not have enough crops and pastoralists lacked food for their animals. So some livestock died and caused losses for pastoralists. After it started to rain then the creeping rain was too much and destroyed all the crops. The country got shocked and started advising the farmers and pastoralists about adaption methods to climate change.

### For more information

- Visit Geography Tanzania: [https://en.wikipedia.org/wiki/Geography\\_of\\_Tanzania](https://en.wikipedia.org/wiki/Geography_of_Tanzania)
- Wildland Adventure: [www.wildland.com/destinations/africa/tanzania/seasonsclimate.aspx](http://www.wildland.com/destinations/africa/tanzania/seasonsclimate.aspx)
- Helpdesk for environment and climate change: <http://sidaenvironmenthelpdesk.se>