LANCET COUNTDOWN: HEALTH AND CLIMATE CHANGE IN AFRICA

KENYA

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
DATA SHEET 2025

Health and climate change in Kenya

The Lancet Countdown on Health and Climate Change tracks the evolving relationship between climate and health through 50+ peer-reviewed indicators. Since 2016, it has provided peer-reviewed annual assessments, published in *The Lancet*. The 2025 report reveals the grave health toll of climate change inaction: fossil fuel dependence, rising emissions, and delayed adaptation are costing millions of lives. Recent climate policy rollbacks further threaten our ability to respond to the accelerating crisis, undermining progress towards a healthy future.

This document highlights key country-level findings from the 2025 Lancet Countdown report for Kenya, showing that:

In Kenya, populations are increasingly exposed to extreme heat, contributing to rising cases of heat-related illness and mortality, and undermining livelihoods and wellbeing.

Frequent and intense droughts are threatening food and water security, damaging sanitation infrastructure, and increasing the risk of malnutrition and infectious disease outbreaks.

Air pollution continues to pose a major health threat, with a high burden of disease and premature deaths linked to exposure to fossil fuel and biomass-derived $PM_{2.5}$ Transitioning to clean energy could significantly reduce these risks.

With the threats of climate change growing, protecting people's health and survival demands simultaneous and unprecedented efforts to advance adaptation and mitigation, and requires an "all hands on deck" approach.

Growing Heat and Droughts

Exposure to high temperatures threatens lives and health, increasing the risk of heat-related illness and mortality. Vulnerable groups, including older adults, young children, pregnant women, and those with pre-existing conditions, face the greatest risks. In Kenya, heatwave exposure has risen above global averages, placing growing pressure on health systems.

""In Turkana County, Kenya, climate change has exacerbated health challenges, particularly through prolonged droughts, food insecurity, and increased disease outbreaks... A specific experience that stands out was during a severe drought when cases of malnutrition and dehydration among children and the elderly surged."

Ekitela Emmanuel Eamons, health researcher, research/education institution

In 2024, people in Kenya were exposed to 11.5 heatwave days each, on average, 250% more than in 2020. Almost none of those days of heatwave exposure would have been expected without climate change. (Indicator 1.1.1)

Compared to 1990-1999, in 2024, people were exposed on average to 424 more hours during which ambient heat would have posed a moderate or higher risk of heat stress if undertaking moderate outdoor physical activity (like running). This was a record high. (Indicator 1.1.2)

1.1B

In 2024, heat exposure resulted in a loss of 1.1 billion potential labour hours, a record high 51h per person, and 186% more than in 1990-1999. The agriculture sector accounted for 74% of these losses. (Indicator 1.1.3)

From 2020-2024, 30% of land area experienced at least one month of extreme drought per year, nearly double the 1951-1960 average. (Indicator 1.2.2) Rising heat intensifies drought conditions, worsening water scarcity and increasing health risks.

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Air Pollution

Continued use of fossil fuels and biomass contributes to high levels of air pollution, increasing the risk of respiratory and cardiovascular diseases, and premature death. In Kenya, transitioning to clean energy could significantly reduce disease burden and healthcare demand.

There were 8,200 deaths associated with anthropogenic outdoor $PM_{2.5}$ air pollution in Kenya in 2022 – 44% above 2010. 18% of these deaths were associated with the burning of fossil fuels, and 49% with biomass burning. The transport sector accounted for 82% of all deaths associated with fossil fuel-derived air pollution. (Indicator 3.2.1)

In 2022, the monetised value of premature mortality due to air pollution in Kenya amounted to US$ 1.95 billion, the equivalent of 1.6% of gross domestic product. (Indicator 4.1.4)

Tree cover loss and urban greenness

0.39M

In 2023, Kenya lost 11,255 hectares of tree cover, and it accumulated a total of 0.39 million hectares of tree cover between 2001 and 2023. (Indicator 3.4)

Both Mombasa and Nairobi have very low levels of urban greenness. The level of greenness decreased by 12% since 2015. (Indicator 2.2.3)

Sea level Rise

The sea surface temperature in coastal areas of Kenya was 0.11C higher in 2024 compared to 1981-2010. (Indicator 1.4) In 2024, 43,389 people were living less than 1m above sea level in Kenya, and therefore at risk from sea level rise. (Indicator 2.3.3)

Wildfire smoke

Wildfire smoke contributes to dangerous air pollution, worsening respiratory and cardiovascular health, and placing additional strain on health systems—especially during prolonged fire seasons. As fire seasons grow longer and more intense due to climate change, exposure to fine particulate matter ($PM_{2.5}$) from smoke increases, heightening risks for children, the elderly, and those with pre-existing conditions.

From 2020–2024, people in Kenya experienced an average of 71 days per year classified as high wildfire risk. Compared to 2003–2012, this represents a 25% increase. (Indicator 1.2.1)

319

In 2020-2024, wildfire smoke (PM2.5) was accountable for an annual average of 312 deaths in Kenya. The average he PM2.5 concentration from wildfires 11% higher than in 2003-2012 (Indicator 1.2.1)

Testimonials were collected by The Geneva Foundation as part of efforts to elevate health worker voices and recognize their lived experiences as valuable evidence in climate and health policy.

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The Lancet Countdown was established in partnership with Wellcome.
For further information, visit lancetcountdown.org

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