LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE

# KENYA

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DATA SHEET 2023

## Health and climate change in Kenya

The *Lancet* Countdown on Health and Climate Change is an academic collaboration of over 200 researchers from around the world, which annually takes stock of the evolving links between health and climate change through 40+ peer-reviewed indicators. Since 2016, these indicators have provided regular, reliable global and regional stocktakes on climate change and health. This document summarises key findings from the 2023 Report of the *Lancet* Countdown* for Kenya, which reveal that:

Trends in **heat and health** are concerning, with populations experiencing increases in exposure to high temperatures, undermining livelihoods and threatening people's health and wellbeing.

Improvements in healthcare access has helped lower vulnerability to ***Aedes*-borne disease**, however, increases in temperature have contributed to expansion of malaria suitability into Kenyan highlands.

Increasing landmass is being impacted by **drought**, reducing crop-yields, undermining food and water security, and contributing to growing malnutrition.

Deaths attributable to **air pollution** are increasing, with responsibility mostly falling on exposure to solid biofuels, like wood and dung.

These findings underline the urgency of strengthening local health systems, adapting to climate change, and pursuing efforts to reduce greenhouse gas emissions through interventions that simultaneously deliver health co-benefits. These actions will help build healthier, more resilient populations, and forge the way to a thriving future for Kenya.

## Heat and health

Exposure to high temperatures threatens people's lives, health, and wellbeing, leading to death and heat-related disease, and increasing healthcare demand during heatwave episodes. Older people, socio-economically deprived communities, very young children, pregnant women, and those with underlying health problems are particularly at risk.

**0.5°C** From 2018 to 2022, the average summer temperatures that people were exposed to were 0.5°C higher than the 1986–2005 baseline average (indicator 1.1.1).

From 2013-2022, each infant was exposed to an average of 5.6 life-threatening heatwave days per year, while adults over age 65 were exposed to 5.4 days per year (indicator 1.1.2).

### ECONOMIC IMPACT OF HEAT

Heat exposure limits labour productivity, which undermines livelihoods and the social determinants of health.

**888 million** potential labour hours lost due to heat exposure in 2022, an increase of 113% from 1991-2000 (indicator 1.1.4).

**US$269 million** potential associated income loss in 2022, equivalent to 4.4% of GDP (indicator 4.1.3).

Agricultural workers were hit the hardest, seeing 84% of the potential hours lost and 61% of the potential income losses in 2022 (indicators 1.1.4 & 4.1.3).

### FUTURE THREATS

Unless urgent mitigation and adaptation action is taken, the health impacts of heat will increase drastically in coming years.

#### 2°C SCENARIO

In a scenario in which temperatures are kept to under 2°C of heating, heatwave exposure for people over age 65 is projected to be 22 times greater by mid-century (2041-2060 average) (indicator 1.1.2).

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# Infectious disease

The suitability for transmission of many infectious diseases, including vector-borne, food-borne, and water-borne diseases, is influenced by shifts in temperature and precipitation associated with climate change.

Increases in temperature in higher elevations has resulted in malaria expansion into highlands in East Africa.

**42%** Compared to 1951-1960, the portion of the year during which conditions are suitable for the spread of malaria in the Kenyan highlands has increased 42%, with conditions suitable for over 2 months of the year (indicator 1.3).

Improvements in public health can lead to reductions in vulnerability and protect populations from the increasing climate suitability for transmission of dengue.

After peaking in 1999, vulnerability to *Aedes*-borne mosquitos responsible for transmitting dengue has been decreasing, largely driven by increases in healthcare quality and access (indicator 2.3.1).

# Drought and health

Droughts and floods can impact crop yields and livestock, increasing the risk of food insecurity and malnutrition. They can also affect water security, impair sanitation, and increase the risk of infectious disease transmission.

**36%** In 2022, 36% of Kenya's land area experienced over 1 month of extreme drought (indicator 1.2.2).

There were nearly 30,000 deaths in Kenya in 2020 due to sub-optimal diets. Of these, 72% were due to insufficient consumption of nutritious, plant-based foods, including fruits, vegetables, whole grains, legumes, nuts, and seeds (indicator 3.3.2).

# Air pollution, energy transition and health co-benefits

Many of the activities that fuel climate change also lead to high levels of health-harming air pollution, which increases the risk of respiratory and cardiovascular disease, lung cancer, diabetes, neurological disorders, and adverse pregnancy outcomes, and leads to a high burden of disease and mortality.

**26%** In 2020, 2,500 deaths were attributable to small particulate matter ($PM_{2.5}$) generated from human activities. This was a 17% increase from 2005 (indicator 3.2.1).

Nationally, the use of dirty fuels in the home resulted in 56 deaths per 100,000 in 2020. This rate was higher in rural areas than urban areas (indicator 3.2.2).

## RENEWABLE ENERGY TRANSITION

Renewable energy made up 16% of total energy supply and contributed 56% of total electricity output in 2020 (indicator 3.1.1).

**94%** In 2020, 94% of household energy came from solid biofuels (like wood and dung) (indicator 3.1.2).

Transitioning energy systems to renewables would benefit human health, simultaneously reducing air pollution; mitigating greenhouse gas emissions; and contributing towards universal, affordable, and clean energy.

FOR FURTHER INFORMATION, VISIT:
**WWW.LANCETCOUNTDOWN.ORG**

*Romanello M, di Napoli C, Green C et al. The 2023 report of the *Lancet* Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. *Lancet* 2023; published online Nov 14. https://doi.org/10.1016/S0140-6736(23)01859-7.