

SENEGAL

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE DATA SHEET 2024

Health and climate change in Senegal

The *Lancet* Countdown on Health and Climate Change annually takes stock of the evolving links between health and climate change through 50+ peer-reviewed indicators. Since 2016, these indicators have provided regular, reliable global and regional stocktakes on climate change and health. Data in this year's report reveal that people all around the world are facing record-breaking threats to their wellbeing, health and survival from the rapidly changing climate. This document summarises key country-level findings from the 2024 report of the *Lancet* Countdown for Senegal, which reveal that:



People are increasingly exposed to **health-threatening extreme heat**, with associated increases in heat-related illness and mortality.



Climatic conditions remain and in some cases, are increasingly suitable for the spread of **infectious diseases** including dengue, malaria, and vibrio.



Increasingly frequent and intense **droughts** threaten crop yields, undermine food security, water security and sanitation, and increase the risk of malnutrition and infectious disease transmission.

These findings underline the urgency of redirecting finance away from health-harming fossil fuels; and towards strengthening local health systems, adapting to climate change, and pursuing efforts to reduce greenhouse gas (GHG) emissions through interventions that simultaneously deliver health co-benefits.

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 people, and those with underlying health problems are particularly at risk.



From 2014-2023, each infant and adult over age 65 was exposed to an average of 2.75 and 2.6 heatwave days per year, respectively. In 2023 alone, the same groups were exposed to record-breaking nearly 8.5 and 8 heatwave days per year (indicator 1.1.1).



From 2014-2023, the total number of heatwave days experienced annually by children under the age of one was 6.8x greater than the equivalent demographic from 1986-2005. Adults over age 65 experienced 7.4x more heatwave days across the same timeframe (indicator 1.1.1).

ECONOMIC IMPACT OF HEAT

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

US\$2.4 billion potential income loss from labour capacity reduction due to heat in 2023 (indicator 4.1.3).

2.3 billion potential labour hours were lost due to heat exposure in 2023, an increase of 213% from the 1990-1999 annual average (indicator 1.1.3).



Agriculture workers were hit the hardest, seeing 80% of the potential hours lost (indicator 1.1.3) and 81% of the potential income losses in 2023 (indicator 4.1.3).

Vulnerability to infectious diseases

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.



The climatic suitability for the transmission of dengue (represented by the basic reproduction number, RO) transmitted by *Aedes aegypti* mosquitos decreased 24.6% from 1951-1960 to 2014-2023, and currently stands at 1.4 (indicator 1.3.1).



From 2014-2023 there were an average of 2.8 months per year when conditions in Senegal's lowlands (<1500m) were suitable for the spread of malaria by *P. falciparum* and *P. vivax*, respectively. This was a decrease of 22.9% compared to the 1951-1960 averages (indicator 1.3.2).



175%

From 2014-2023, the average annual population living within 100 km from coastal waters with conditions suitable for *Vibrio* transmission reached 8.4 million, representing a 175.6% increase (indicator 1.3.3).

Drought, food security, and health

Increasingly frequent and intense droughts threaten crop yields, undermine food security, water security and sanitation, and increase the risk of malnutrition and infectious disease transmission.



Each year from 2019-2023, 98.7% of Senegal's land area experienced at least one month of extreme drought, 88.7% experienced at least three months of extreme drought, and 61% experienced at least six months of extreme drought. These estimates rose to 100%, 100%, and 81%, respectively, in 2023 alone (indicator 1.2.2).

Climate change is exacerbating food insecurity and undernutrition by reducing crop yields, labour capacity, and access to water and sanitation; disrupting supply chains; and compromising marine resources through higher coastal sea surface temperatures, reduced oxygenation, ocean acidification, and coral reef bleaching.



From 2021-2023, average coastal temperature exceeded the 1981-2010 average by 0.5°C (indicator 1.4.2). This shift underscores the threat to marine food security induced by climate change.

Household air pollution, energy transition and health co-benefits

Household energy use is a key determinant of health and is linked to economic development. However, people still use dirty fuels and technologies for cooking. The use of dirty fuels for cooking represents a substantial health hazard, especially exposing women and young children to high levels of air pollution.



Compared to 2000, the contribution of biomass to household energy decreased from 81% to 70% while the contribution of electricity increased from 4% to 15%, and fossil fuel contribution remained unchanged at 15% (indicator 3.1.2).



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Indoor $PM_{2.5}$ derived from the burning of solid household fuels resulted in nearly 58 deaths per 100,000 in Senegal in 2020 (indicator 3.2.2).

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. This highlights the need for investment in technology transfers and cheaper financing for countries that still rely heavily on fossil fuels.

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