

NIGERIA

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE DATA SHEET 2023

Health and climate change in Nigeria

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 Nigeria, which reveal that:



Trends in **heat and health** are particularly 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, climatic conditions remain suitable for the spread of **vector-borne diseases** including dengue and malaria.



Air pollution is increasingly affecting the health of local populations, with a high burden of disease and deaths that could be avoided by transitioning to zero-emission, clean energy sources.



The persistent net **subsidising of fossil fuels** for billions of dollars restricts funds available for health-supportive services, and hampers a transition towards clean, zero-emission energy.

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 Nigeria.

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.



From 2018 to 2022, the average summer temperatures that people were exposed to were 0.6°C higher than the 1986–2005 baseline average (indicator 1.1.1).



From 2013-2022, children under the age of one were exposed to 4.1 times as many heatwave days annually than the equivalent demographic were on average from 1986-2005. Adults over age 65 were exposed to 4.7 times as many across the same timeframe (indicator 1.1.2).



From 2013-2022, each infant was exposed to an average of 6 life-threatening heatwave days per year, while adults over age 65 were exposed to 7 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.

15.9 billion potential labour hours lost due to heat exposure in 2022, an increase of 96% from 1991-2000 (indicator 1.1.4).



Agricultural workers were hit the hardest, seeing 78.7% of the potential hours lost and 68.2% of the potential income losses in 2022 (indicators 1.1.4 & 4.1.3).

FUTURE PROJECTIONS

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 8 times greater by mid-century (2041-2060 average) (indicator 1.1.2).

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. Improvements in public health and in healthcare access can lead to reductions in vulnerability and protect populations from the negative health impacts associated with an increasing climate suitability for transmission of dengue.

19%

From 2013-2022, the basic reproduction number (R₀, an indication of transmissibility) for dengue was 19% higher than in 1951-1960 (indicator 1.3).



In 2022, around 800km of Nigeria's coast was suitable for the transmission of *Vibrio* pathogens, which are responsible for a range of human infections including sepsis and cholera.

141%

The number of Vibriosis cases reached an all-time high in 2022, with more than 25,000 cases. Vibriosis cases have increased by 141% in 2022 compared to a 1982-2010 baseline (indicator 1.3).

25%

Largely due to improvements in healthcare access, vulnerability to *Aedes*-borne disease from 2012-2021 was nearly 25% lower than in the 1990s (indicator 2.3.1).

Air pollution, energy transition and health co-benefits

The low adoption of clean renewable energy and the continued use of fossil fuels and biomass lead to high levels of air pollution, which increases the risk of respiratory and cardiovascular disease, lung cancer, diabetes, neurological disorders, adverse pregnancy outcomes, and leads to a high burden of disease and mortality. All of these lead to increasing demand on care services.

33%

In 2020, nearly 7,700 deaths were attributable to small particulate matter (PM_{2.5}) generated from human activities, a 33.4% increase from 2005 (indicator 3.2.1).



Of these deaths in 2020, 14.1% were caused by fossil fuel burning, and 56.4% by biomass (such as wood, dung) burning (indicator 3.2.1).



Nigeria allocated a net total of US\$442 million in fossil fuel subsidies in 2020 alone, an amount equivalent to nearly 3% of the nation's health expenditure (indicator 4.2.4).

RENEWABLE ENERGY TRANSITION



In 2020, the carbon intensity of Nigeria's energy system was 8% lower than the prior year. However, this was a 1% increase from 1992 levels, the year the UNFCCC was adopted.(indicator 3.1.1).



Renewable sources of energy made up less than 0.2% of electricity output in 2020 (indicator 3.1.1). In the same year, none of Nigeria's total energy supply came from renewable sources.

97%

In 2020, 97.4% of domestic energy used per person in Nigeria came from solid biofuels (like wood and dung). Only 1.3% of the domestic energy used per person in Nigeria is non-polluting at point of use (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.

Carbon prices help economies transition away from high-carbon fuels, whereas fossil fuel subsidies provide incentives for health-harming emissions and slow the low-carbon transition. Redirecting fossil fuel subsidy funds to incentivising the expansion and affordability of low-carbon power and to health-promoting interventions would deliver net benefits to local populations and support a just transition.

Sea level rise and health

Sea level rise can affect human health through episodic flooding, permanent inundation, erosion, soil and drinking water contamination, vector- and water-borne disease, and mental health impacts, with populations living less than 1 metre above sea level particularly vulnerable.



In 2022, over 798,000 people were living less than 1 metre above sea level.

*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](https://doi.org/10.1016/S0140-6736(23)01859-7).