

BANGLADESH

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
DATA SHEET 2023

Health and climate change in Bangladesh

The *Lancet* Countdown on Health and Climate Change is an academic collaboration of 200+ global experts, who annually update a series of 40+ peer-reviewed indicators to monitor the impact of climate change on health, and identify the health opportunities of climate action. 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 Bangladesh, 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.



Deaths attributable to **air pollution** are increasing, with responsibility mostly falling on exposure to fossil fuels and biomass derived PM_{2.5}.



Populations are vulnerable to both the effects of **sea-level rise and drought**, threatening both direct health impacts as well as indirect impacts of population migration and displacement.



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.

Heat and health

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

3X

From 2018 to 2022, the average summer temperatures that people were exposed to were 0.9°C higher than the 1986–2005 baseline average (indicator 1.1.1).



From 2013–2022, children under the age of one in Bangladesh were exposed to 166% more heatwave days annually than global average from 1986–2005. Adults over age 65 saw a 139% increase across the same timeframe (indicator 1.1.2).

138%

Annual heat-related deaths amongst people over 65 years old increased by 138% from 2000–2004 to 2018–2022, due to the combination of an increasing over-65 vulnerable population and rising temperatures (indicator 1.1.5).

ECONOMIC IMPACT OF HEAT

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

25 billion potential labour hours lost due to heat exposure in 2022, an increase of 20% from 1991–2000 (indicator 1.1.4).

US\$19 billion potential associated income loss in 2022, equivalent to 4.2% of GDP (indicator 4.1.3).



Agricultural workers were hit the hardest, seeing 65% of the potential hours lost and 56% of the potential income losses in 2022 ((indicators 1.1.4 & 4.1.3).

FUTURE THREATS

2C WARMING 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 increase 10-fold by mid-century (2041–2060 average) (indicator 1.1.2).

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.

13.6 M

In 2022, 13.6 million people were living less than 1 metre above sea level (indicator 2.3.3).

8%

With global mean sea level rise increasing 4.68mm per year between 2013 and 2022, this puts 8% of Bangladesh's population in a vulnerable position.

4.1 M

Over the last 5 years (2018-2022), an average of 4.1 million people in Bangladesh have been impacted by floods each year (indicator 2.3.2).

Without sufficient adaptation measures, sea level rise could prompt relocation of vulnerable populations. The health impacts of human relocation will depend on the policies put in place to protect the health of migrant or immobile populations.

Droughts and health

Droughts can impact crop yields, food and water security, sanitation and electricity generation.

126%

The amount of land experiencing at least one month of extreme drought per year has increased 126% from 1951-1960 to 2013-2022. In 2022, 31% of Bangladesh's land area experienced over 6 months of extreme drought (indicator 1.2.2).

Vulnerability to infectious diseases

Since at least the 1980s, 100% of the Bangladesh coastline has been suitable for vibrio transmission, with Vibriosis cases reaching an all-time high in 2022 (over 20,000 cases) (indicator 1.3).



Conditions are suitable for the spread of malaria for more than half of the year, and the basic reproduction number (an indication of how many other people each infected person will make sick) for dengue has been above 4 since at least the 1950s (indicator 1.3).

15%

Largely due to improvements in healthcare access, from 2012-2021 vulnerability to Aedes-borne disease was 15% lower than in the 1990s (indicator 2.3.1).

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.

42%

In 2020, over 100,000 deaths were attributable to small particulate matter (PM_{2.5}) generated from human activities (anthropogenic). This was a 42% increase from 2005 (indicator 3.2.1).



Of total deaths in 2020, 35% were caused by PM_{2.5} from fossil fuel burning, while 28% were due to the use of biomass (such as wood and dung) (indicator 3.2.1).

RENEWABLE ENERGY TRANSITION



Renewables and other low carbon sources of energy made up less than 1% of total energy supply and contributed to less than 2% of total electricity output in 2020 (indicator 3.1.1).

78%

78% of all household energy came from dirty fuels (biomass, fossil fuels, and natural gas) in 2020 (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](https://doi.org/10.1016/S0140-6736(23)01859-7).

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