

INDIA

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE DATA SHEET 2025

Health and climate change in India

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 India, showing that:



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



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}.



Combined with rising temperatures and changing rainfall patterns, the risk of mosquito- and water-borne disease transmission is rising in India.

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.

Heat and Health

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 India, heatwave exposure is rising, placing growing pressure on health systems.

"In June 2022, a severe heatwave struck Delhi's urban slums, with temperatures exceeding 45°C for days. The heat led to dehydration, heatstroke, and exacerbated respiratory issues, especially among pregnant women, children, and elderly residents. Overcrowded health centres treated hundreds daily"

-Arshi Mehboob, health researcher,
research/education institution,
Delhi urban slums

19.8

In 2024, people in India were exposed to 19.8 heatwave days each, on average. Of these, 6.6 days of exposure would not have been expected to occur without climate change. (Indicator 1.1.1)



Compared to 1990-1999, in 2024, people were exposed on average to 366 more hours during which ambient heat would have posed a moderate or higher risk of heat stress if undertaking moderate outdoor physical activity. This was a record high. (Indicator 1.1.2)



For 2024, heat exposure resulted in a loss of 247 billion potential labour hours per year, a record high 419h per person, and 124% more than in 1990-1999. The agriculture sector accounted for 66%, and the construction sector accounted for 20% of losses in 2024. (Indicator 1.1.3)



The associated potential income lost from labour capacity reduction due to extreme heat was US\$194 billion in 2024. (Indicator 4.1.3)

Air Pollution and Health

Air pollution continues to pose a major health threat in India, 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.



There were over 1,718,000 deaths attributable to anthropogenic air pollution (PM_{2.5}) in 2022 in India, an increase of 38% since 2010. Fossil fuels (coal and liquid gas) contributed to 752,000 (44%) of these deaths in 2022, while coal accounted for 394,000 deaths, primarily from its use in power plants (298,000 deaths). The use of petrol for road transportation contributed to 269,000 deaths. (Indicator 3.2.1)



In 2022, the monetised value of premature mortality due to outdoor air pollution in India amounted to US\$ 339.4 billion, the equivalent of 9.5% of gross domestic product. (Indicator 4.1.4)



In 2022, household air pollution due to the use of polluting fuels in India was associated with 113 deaths per 100,000. Mortality rates associated with household air pollution were higher in rural than urban areas (125 per 100,000 in rural and 99 per 100,000 in urban). (Indicator 3.2.1)

Vulnerability to Infectious Diseases and Sea level Rise

Climate change is increasing the suitability for transmission of vector-, food-, and water-borne diseases. In India, changing temperature and precipitation patterns are expanding the risk zones for dengue, vibrio and other climate-sensitive diseases.



Compared to 1951-1960, the average R_0 for dengue transmission by *Aedes albopictus* mosquitoes increased from 0.86 to 1.60 in 2015-2024, crossing from less than to more than 1. (Indicator 1.3.1)



The total coastal area environmentally suitable for *Vibrio* transmission was 46% greater in 2024, compared to the 1982-2010 baseline. (Indicator 1.3.6)



In 2024, over 18 million people were living less than 1 m above sea level in India, and therefore at risk from sea level rise. (Indicator 2.3.3)

Tree Cover Loss

Loss of tree cover and low urban greenness reduce natural cooling, worsen air quality, and limit climate adaptation, especially for vulnerable urban populations facing rising heat extremes.



Between 2001 and 2023, India lost a cumulative total of 2.33 million hectares of tree cover, of which 143,000 were lost only in 2023. The biggest single driver was forestry. (Indicator 3.4)



Of the 189 most populous cities in India (>500,000 in habitants), 14 had exceptionally low levels of urban greenness, 110 had very low levels, 42 had low levels, and 22 had moderate levels. Only Tamluk was classified as having high levels of urban greenness. From 2015 to 2024, the average urban greenness in India has decreased 3.6%. (Indicator 2.2.3)

Testimonials were collected by The Geneva Learning 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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