LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE
In collaboration with Wellcome

A decade tracking progress on health and climate change

CANADA

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
DATA SHEET 2026

Health and Climate Change in Canada

The Lancet Countdown on Health and Climate Change tracks the connections between health and climate change. In its tenth iteration, the 2026 Global Report shows that the health impacts of climate change have escalated, and frequently accelerated, in the decade since the Paris Agreement came into force.

This document draws on findings from the 2026 Lancet Countdown Global Report to present key insights for Canada.

Increasing heat exposure is placing vulnerable populations in Canada at greater risk of heat-related illness and mortality, while limiting safe physical activity, disrupting sleep and reducing labour capacity, with consequences for health and livelihoods.

Wildfire-smoke-related mortality has increased substantially in Canada, while extreme drought has become more widespread, posing additional risks to water security, food production and livelihoods.

Increasing climatic suitability for West Nile virus and Vibrio transmission highlights changing infectious-disease risks in Canada, although transmission potential varies considerably across pathogens.

Air pollution continues to impose a substantial health and economic burden in Canada. Expanding renewable electricity use across households and road transport can reduce harmful air pollution, protect health and lower greenhouse gas emissions.

Heat and Health

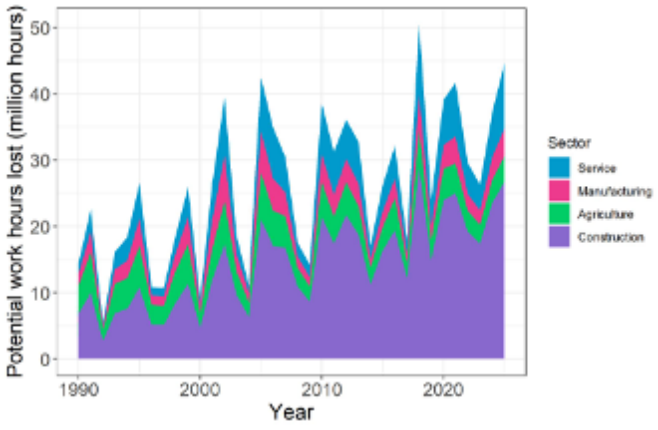
Exposure to high temperatures increases the risk of heat-related illness and mortality. Vulnerable groups, including older adults, young children, pregnant women, and those with pre-existing conditions, face the greatest risks.

80% of the heatwave days that people in Canada were exposed to on average were directly attributable to climate change in 2025. Children under one year of age and adults over 65 in Canada each experienced an average of approximately 10 heatwave days annually between 2021 and 2025, around five additional days per year compared with 1986–2005. (Indicator 1.1.1)

The average annual monetised value of heat-related mortality among people aged over 65 in Canada was US$3.2 billion between 2021 and 2025, equivalent to approximately 182,000 average annual incomes. This was 219% higher than in 2000–2004. (Indicator 4.1.2)

People in Canada were exposed to approximately 36 more hours annually in which heat posed a moderate or higher risk of heat stress during moderate outdoor physical activity (e.g., brisk walking) between 2016 and 2025 than the annual average in the 1990s. (Indicator 1.1.2)

Annual potential work hours lost, disaggregated by economic sector. Canada, 1990-2025.



People in Canada lost an estimated 21 hours of sleep annually due to high night-time temperatures between 2021 and 2025, approximately 1.3 hours more per year than in 1986–2005. (Indicator 1.1.4)

Heat exposure caused an average annual loss of 34.3 million potential labour hours in Canada between 2016 and 2025, more than double the annual average in the 1990s. Construction accounted for approximately 62% of these losses. (Indicator 1.1.3)

Heat-related labour capacity reduction in Canada caused an estimated potential earnings loss of US$1.16 billion in 2025, with construction accounting for 64% of these losses. (Indicator 4.1.3)

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Wildfire Smoke, Drought and Health

Wildfire smoke contributes to harmful air pollution, increasing the risk of respiratory and cardiovascular diseases and premature mortality, including among populations far from active fires. Drought can threaten water availability, food security and livelihoods, with consequences for health. In Canada, wildfire-smoke mortality has increased substantially, while extreme drought has become more widespread.

LIVED EXPERIENCE

During the wildfires, there just was no capacity to deal with the asthma and breathing problems on top of evacuation and fire fighting.

Anonymous, member of the health community, Canada

Wildfire smoke was associated with an annual average of approximately 4,000 deaths in Canada between 2021 and 2025, compared with approximately 1,050 annually in 2003–2012, an increase of around 275%. The mortality rate also increased from 3.3 to 10.6 deaths per 100,000 people over the same period. People in Canada experienced an average of 2.8 days annually of very high or extremely high wildfire danger between 2021 and 2025, twice the annual average in 2003–2012. (Indicator 1.2.1)

An average of 49% of Canada's land area experienced at least one month of extreme drought annually between 2021 and 2025, compared with 28% in 1981–1990. The number of months with low freshwater storage increased by almost 10% between 2006–2015 and 2016–2025. (Indicator 1.2.2)

Canada lost approximately 5.2 million hectares of tree cover in 2024, 148% more than in 2016. Wildfires accounted for 86% of this loss. (Indicator 3.4)

Canada's 2023 wildfire season burned approximately 14.6 million hectares, the largest area recorded since national records began in 1959, and led to the evacuation of approximately 232,000 people across more than 200 communities.[1]

Infectious Diseases

Changes in temperature, rainfall and coastal conditions can influence the environmental suitability for mosquito-borne and waterborne disease transmission. In Canada, climatic suitability has increased for several pathogens, although these indicators describe conditions favourable for transmission rather than observed infections, and risks vary considerably across diseases.

Climatic suitability for West Nile virus transmission in Canada increased by 63% between 2016–2025 and 1951–1960. The transmission potential of dengue through *Aedes albopictus* mosquitoes was also 6.8% higher between 2016 and 2025 than in 1951–1960. (Indicator 1.3.1)

The length of Canada's coastline with conditions suitable for *Vibrio* transmission increased by 41% compared with 1982–1991, reaching over 4,600 km in 2025. Estimated vibriosis cases more than doubled compared with the historical baseline, reaching an annual average of over 2,760 cases between 2016 and 2025. (Indicator 1.3.2)

Energy Transition and Health

Fossil fuel combustion contributes to harmful air pollution, increasing the risk of respiratory and cardiovascular diseases and premature mortality. According to the World Health Organization (WHO), Canada's annual mean concentration of fine particulate matter ($PM_{2.5}$) was 6 μg/m³, exceeding WHO's recommended annual guideline of 5 μg/m³.[2] Reducing dependence on polluting fuels can improve air quality and protect health, while also reducing greenhouse gas emissions.

Health systems are a first line of defence against the health impacts of climate change, yet their own emissions contribute to the threats they must address. Building climate-resilient, low-carbon health systems is essential to protecting health while reducing the sector's contribution to climate change. Canada's healthcare sector emitted 39 Mt of greenhouse gases in 2023, a 137% increase from 2016. (Indicator 3.5)

The monetised value of premature mortality associated with air pollution in Canada reached US$88 billion in 2023, equivalent to almost 4% of national GDP. (Indicator 4.1.4)

Low-carbon sources accounted for 78.6% of Canada's electricity generation in 2023, but only 19.8% of total energy supply. (Indicator 3.1.1)

Electricity accounted for 48.4% of household energy use in Canada in 2023. Increasing household electrification powered by renewable electricity can reduce harmful air pollution from fuel combustion in homes and its associated health risks. (Indicator 3.1.2)

Electricity accounted for almost none (0.2%) of road transport energy use in Canada in 2023, unchanged from 2016. (Indicator 3.1.3)

Revenues from carbon pricing in Canada exceeded fossil fuel subsidies in 2024, generating net carbon-pricing revenues of US$9.6 billion, equivalent to almost 4% of national health expenditure. (Indicator 4.3.2)

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.

Romanello M, Walawender M, Israelsson J et al. The 2026 report of the Lancet Countdown on health and climate change: A decade of escalating health harms and a decisive moment for all. The Lancet 2026; published online October 2026. https://doi.org/10.1016/S0140-6736(26)01779-4
1.Environment and Climate Change Canada. Canada's Changing Climate Report 2026: Chapter 8 — Changes in Extremes.
World Health Organization (2023). Health and environment scorecard: Canada