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

A decade tracking progress on health and climate change

JAPAN

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
DATA SHEET 2026

Health and Climate Change in Japan

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 Japan.

Increasing heat exposure is affecting vulnerable populations in Japan, limiting safe physical activity, disrupting sleep and reducing labour capacity, with consequences for health and livelihoods.

Changing environmental conditions are increasing the suitability for dengue, malaria, West Nile virus and Vibrio transmission in Japan, highlighting the importance of climate-informed disease surveillance.

Rising coastal sea temperatures threaten marine ecosystems and food security in Japan, while millions of people living in low-lying coastal areas face potential risks from flooding, displacement and disruption to essential services.

Fossil fuel combustion contributes to harmful air pollution and premature mortality in Japan. Increasing renewable electricity use across households and transport can help protect health while reducing greenhouse gas emissions.

Heat and Health

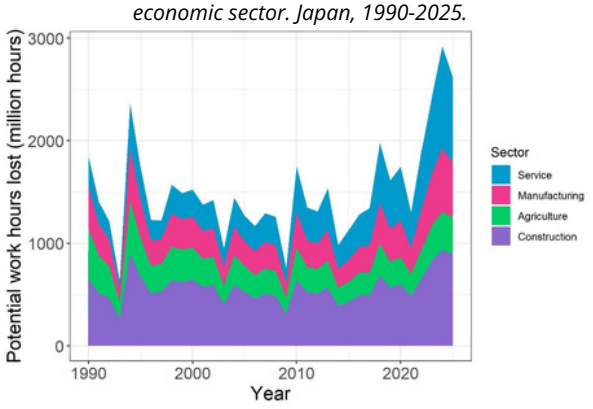
Exposure to high temperatures increases the risk of heat-related illness and mortality. Vulnerable groups, including older adults, young children, pregnant women, and those with pre-existing conditions, face the greatest risks. Heat can also disrupt sleep, limit safe physical activity and reduce people's capacity to work.

In 2025, 71.7% of the heatwave days that people in Japan were exposed to on average were directly attributable to climate change. Children under one year of age and adults over 65 in Japan each experienced approximately 19 additional heatwave days annually between 2021 and 2025 compared with 1986–2005, reaching an average of approximately 25 heatwave days per year for both groups. (Indicator 1.1.1)

The average annual monetised value of heat-related mortality among people aged over 65 in Japan was US$19.1 billion between 2021 and 2025, equivalent to approximately 1.1 million average annual incomes. This was a 263% increase compared with 2000–2004. (Indicator 4.1.2)

People in Japan were exposed to over 720 hours per year 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, over 180 hours more than the annual average in the 1990s. (Indicator 1.1.2)

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



People in Japan lost an estimated 38 hours of sleep annually due to high night-time temperatures between 2021 and 2025, approximately 3 hours more per year than in 1986–2005. (Indicator 1.1.4)

Heat exposure caused an average annual loss of 1.9 billion potential labour hours in Japan between 2016 and 2025, 30% higher than the annual average in the 1990s. Construction accounted for approximately 35% of these losses. (Indicator 1.1.3)

Heat-related labour capacity reduction in Japan caused an estimated potential earnings loss of US$46.3 billion in 2025, equivalent to 1.1% of national GDP. Construction accounted for approximately 40% of these losses. (Indicator 4.1.3)

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Climate-Sensitive Infectious Diseases

Changes in temperature, rainfall and other environmental conditions can increase the suitability for transmission of mosquito-borne and waterborne diseases. Strengthening climate-informed disease surveillance can support the early detection of and response to emerging health risks.

The transmission potential (R_0) of dengue spread by *Aedes albopictus* mosquitoes in Japan increased by 282% between 2016–2025 and 1951–1960, indicating increasingly favourable environmental conditions for transmission.
Climatic suitability for West Nile virus transmission in Japan increased by 24% between 2016–2025 and 1951–1960.
The number of months environmentally suitable for malaria transmission in Japan increased by 21% for *Plasmodium falciparum* and 13% for *P. vivax* between 2016–2025 and 1981–1990, reaching an average of 3.7 and 4.4 months per year, respectively. (Indicator 1.3.1)

The length of Japan's coastline with conditions suitable for *Vibrio* transmission increased by 178% compared with 1982–1991, reaching approximately 835 km in 2025. Estimated vibriosis cases more than doubled between the historical baseline and 2016–2025, reaching an annual average of approximately 27,200 cases. (Indicator 1.3.2)

Coastal Change and Health

Rising coastal sea surface temperatures can affect marine ecosystems and fisheries, with implications for food security and livelihoods. Sea-level rise can also increase the risk of coastal flooding, displacement and disruption to essential services, with consequences for health. In Japan, substantial coastal warming and the concentration of populations in low-lying areas highlight these interconnected risks.

Approximately 6.6 million people in Japan (5.3% of the population) lived in areas less than one metre above sea level in 2025, highlighting potential risks from coastal flooding, displacement and disruption to essential services. (Indicator 2.3.3)

Coastal sea surface temperatures around Japan were 1.7°C higher between 2023 and 2025 than in 1981–2010. Warming coastal waters can affect marine ecosystems and fish stocks, with implications for marine food security and livelihoods. (Indicator 1.4.1)

Energy Transition and Health

Fossil fuel combustion contributes to harmful air pollution, increasing the risk of respiratory and cardiovascular diseases and premature mortality. Reducing dependence on polluting fuels can improve air quality and protect health, while also reducing greenhouse gas emissions.

Exposure to anthropogenic fine particulate matter ($PM_{2.5}$) was associated with over 93,000 deaths in Japan in 2023, a 10% increase from 2016. Fossil fuel combustion contributed to 32% of these deaths, with coal responsible for approximately 34% of fossil fuel-related air-pollution deaths (Indicator 3.2.1)

The monetised value of premature mortality associated with air pollution in Japan reached approximately US$262 billion in 2023, equivalent to 5.9% of national GDP. (Indicator 4.1.4)

CLIMATE-RESILIENT, LOW-CARBON HEALTHCARE

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.

Japan's healthcare sector emitted 75.1 million tonnes of greenhouse gases in 2023, a 22% decrease from 2016. (Indicator 3.5)

Electricity accounted for 54.8% of household energy use in Japan in 2023, while 44.7% came from fossil fuels. (Indicator 3.1.2)

Japan's road transport energy use remained overwhelmingly dependent on fossil fuels in 2023, which accounted for 99.2% of the total. (Indicator 3.1.3)

Coal accounted for 26.2% of Japan's total energy supply in 2023, despite growth in renewable electricity generation. (Indicator 3.1.1)

Fossil fuel subsidies in Japan exceeded revenues from carbon pricing in 2024, resulting in net subsidies of US$44.7 billion, equivalent to 9.4% of the reported national health spending comparator. Reducing fossil fuel dependence can improve air quality and protect health. (Indicator 4.3.2)

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