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

A decade tracking progress on health and climate change

KAZAKHSTAN

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
DATA SHEET 2026

Health and Climate Change in Kazakhstan

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 presents key country-level findings from the 2026 Lancet Countdown report for Kazakhstan.

Climate change is driving most of the heatwave days now experienced in Kazakhstan. Heatwave exposure among infants and older adults has risen sharply, and the economic losses from heat-related deaths are growing fast.

Extreme drought has become far more widespread across Kazakhstan, threatening water availability, food security and livelihoods.

Kazakhstan's energy system remains heavily dependent on coal, with little growth in low-carbon sources. Fossil-fuel subsidies far exceed carbon-pricing revenues, and preparedness for the low-carbon transition has declined sharply.

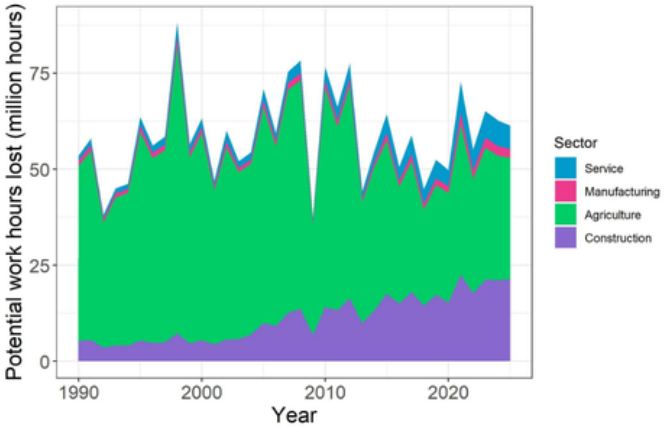
Deaths linked to eating too few plant-based foods have fallen in Kazakhstan, but diet-related deaths remain high, and red meat and dairy continue to dominate food-related emissions.

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.

67.4% of the heatwave days that people in Kazakhstan were, on average, exposed to between 2021 and 2025 would not have been expected to occur without climate change. Children under one year of age and adults over 65 experienced an average of 11.7 and 9.3 additional heatwave days per year, respectively, between 2016 and 2025. This was an increase of 167% and 127% compared with the 1986–2005 baseline. (Indicator 1.1.1)

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



ECONOMIC IMPACT OF HEAT

Heat stress reduces labour productivity, undermining livelihoods and the social determinants of health. In Kazakhstan, this has direct implications for income, food security, and access to care.

- The average annual economic value of heat-related mortality losses in those over age 65 was US$1.3 billion (as per 2025 currency exchange values, US$1 = 521.04 Kazakhstani Tenge) between 2021 and 2025, which is equivalent to 73,900 average incomes of Kazakhstan. This is a 187% increase since 2000 to 2004. (Indicator 4.1.2)
- The potential income lost from reduced labour capacity due to heat was US$200 million in 2025. Workers in the construction sector were the most severely affected, incurring 51% of the potential losses, followed by agriculture sector with 34%. (Indicator 4.1.3)

People were exposed to 97 more hours of moderate or higher risk of heat stress if undertaking moderate outdoor physical activity (e.g., brisk walking) per year in 2016-2025 compared with the 1990s. (Indicator 1.1.2)

Heat exposure caused an annual loss of 57.3 million potential labour hours on average, between 2016 and 2025, which is 1.7% higher than the average year in the 1990s. The agriculture sector accounted for 54.7% of potential losses and the construction sector 32%. (Indicator 1.1.3)

Extreme Weather Events and Health

Droughts are becoming more frequent and severe as the climate changes. Drought reduces crop yields and livestock productivity and limits access to safe water, increasing risks of food insecurity, malnutrition and disease. In Kazakhstan, strengthening preparedness and early warning is essential to protect health from these hazards.

An average of 51% of Kazakhstan's land area experienced at least one month of extreme drought per year from 2021 to 2025, up from 6% from 1981 to 1990. In 2025, 22% of Kazakhstan's land area experienced over 6 months of extreme drought. At the same time, the number of months with low freshwater storage increased by 4% between 2006 to 2015 and 2016 to 2025. (Indicator 1.2.2)

Kazakhstan reported that its national meteorological and hydrological services provide climate information for the health sector. This is essential for an effective health response to climate-related risks. (Indicator 2.2.1)

In 2025, Kazakhstan reported "high" implementation of health emergency management capacity. This is a decrease from "very high" in 2022. (Indicator 2.2.4)

Energy Transition and Health Co-benefits

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), Kazakhstan's annual mean concentration of fine particulate matter ($PM_{2.5}$) was 27 μg/m³, almost five times the WHO's recommended annual guideline of 5 μg/m³.1 Reducing dependence on polluting fossil fuels can improve air quality and protect health, while also reducing greenhouse gas emissions.

In 2023, the carbon intensity of Kazakhstan's energy system increased to 76.4 tCO_2/TJ, 3% higher than in 2016. As of 2023, coal comprised 48.6% of total energy supply and 58.4% of electricity generation. Low-carbon sources accounted for 1.7% of total energy supply and 12.7% of electricity, unchanged since 2016. (Indicator 3.1.1)

In 2023, 42% of household energy came from liquid fossil fuel and natural gas and a further 25% from coal, coke and peat, meaning two-thirds came from fossil fuels. (Indicator 3.1.2)

In 2023, fossil fuels still accounted for over 99% of all road transport energy, and electricity for less than 0.1%. (Indicator 3.1.3)

In 2023, Kazakhstan had 1.8 Mt of greenhouse gas emissions from the healthcare sector. This was a 19.6% increase from 2016. (Indicator 3.5.1)

Kazakhstan had a net-negative carbon revenue in 2024, indicating that fossil fuel subsidies were higher than carbon prices. The country saw a net subsidy of US$11.7 billion, which is equivalent to 119% of the national health budget. (Indicator 4.3.2)

Kazakhstan assesses the population health risks of environmental exposures, including air pollution, through a legally established framework within its national sanitary and epidemiological monitoring system.[2]

Diet and Health

Shifting to healthier, plant-rich diets can reduce agricultural emissions and improve health outcomes. In Kazakhstan, diet-related risks contribute to preventable deaths and chronic disease burden.

The emissions associated with demand for agricultural food products increased by 12.6% between 2016 to 2023. Red meat and dairy emissions increased by 5.4% in the same time period and accounted for 78% of all consumption-related emissions in 2023. (Indicator 3.3.1)

In 2023, 16,000 deaths were linked to not eating enough healthy plant-based foods, like fruits, vegetables, beans, whole grains, nuts, and seeds, down from 17,400 in 2016. Another 9,700 deaths were linked to eating excessive dairy, red meat, and processed meat, an increase by 1.7% (160 deaths) from 2016. (Indicator 3.3.2)

A plan for the development of a Healthy and Safe Nutrition System in the Republic of Kazakhstan for 2026–2029 is currently being developed.[3]

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. World Health Organization (2023). Health and environment scorecard: Kazakhstan
2. National sanitary and epidemiological monitoring system; Committee of Sanitary and Epidemiological Control of the Ministry of Healthcare of the Republic of Kazakhstan (Based on feedback to this datasheet)
3. Ministry of Healthcare of the Republic of Kazakhstan (Based on feedback to this datasheet)