

# GERMANY

## LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE DATA SHEET 2024

### Health and climate change in Germany

The *Lancet* Countdown on Health and Climate Change annually takes stock of the evolving links between health and climate change through 50+ peer-reviewed indicators. Since 2016, these indicators have provided regular, reliable global and regional stocktakes on climate change and health. Data in this year's report reveal that people all around the world are facing record-breaking threats to their wellbeing, health and survival from the rapidly changing climate. This document summarises key country-level findings from the 2024 report of the *Lancet* Countdown\* and the 2024 Europe report of the *Lancet* Countdown\*\* for Germany, 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.



**Air pollution** is harming peoples' health, with a high burden of disease and deaths that could be avoided by transitioning to zero emission, clean energy sources.



Unhealthy, **unsustainable diets** are contributing to GHG emissions and undermining health and wellbeing in Germany, with deaths attributable to dietary risks that could be reduced through balanced, low-emission diets.

These findings underline the urgency of redirecting finance away from health-harming fossil fuels; and towards strengthening local health systems, adapting to climate change, and pursuing efforts to reduce greenhouse gas (GHG) emissions through interventions that simultaneously deliver health co-benefits.

### Heat and health

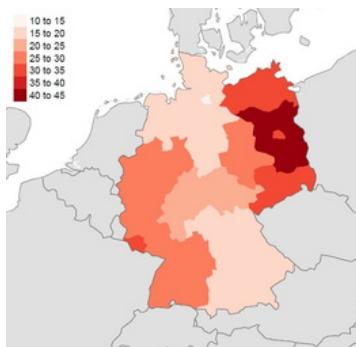
Exposure to high temperatures threatens people's lives, health, and wellbeing, leading to death and heat-related disease, and increasing healthcare demand during heatwave episodes. Older people, socio-economically deprived communities, very young children, pregnant people, and those with underlying health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



In 2013-2022, Germany's overall mean increase in heat-related deaths was estimated at 25 deaths per 100,000 inhabitants (indicator 1.1.4).\*\* From 2014-2023, each infant under the age of one and adults over the age of 65 was exposed to an average of 8 heatwave days per year (indicator 1.1.1).



From 2014-2023, the annual number of hours during which ambient heat posed a moderate or higher risk of heat stress during light outdoor physical activity was nearly twice as high as in 1990-1999 (indicator 1.1.2).



CHANGE IN HEAT-RELATED MORTALITY RATE IN GERMANY EXPRESSED AS THE NUMBER OF DEATHS PER 100,000 INHABITANTS BETWEEN 2003-12 AND 2013-22.\*\*

### ECONOMIC IMPACT OF HEAT

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

**US\$985.5 million**

was the potential income loss from labour capacity reduction due to heat in 2023 (indicator 4.1.3).



37 million potential labour hours were lost due to heat exposure in 2023. Construction workers were hit the hardest, seeing 58% of the potential hours lost (indicator 1.1.3) and 56% of the potential income losses in 2023 (indicator 4.1.3).

## Air pollution, energy transition and health co-benefits

The continued use of fossil fuels and biomass lead to high levels of air pollution, which increases the risk of respiratory and cardiovascular disease, lung cancer, diabetes, neurological disorders, adverse pregnancy outcomes, and leads to a high burden of disease and mortality.

### HEALTH IMPACTS OF AIR POLLUTION



In 2021, there were over 64,600 deaths attributable to anthropogenic air pollution (PM<sub>2.5</sub>) in Germany. Fossil fuels (coal and liquid gas) contributed to 37.5% of these deaths (indicator 3.2.1).

**US\$208 billion**

is the monetised value of premature mortality due to anthropogenic air pollution in 2021 (indicator 4.1.4).

**\$4.5bn**

In 2022, Germany had a net-negative carbon revenue, indicating that fossil fuel subsidies were higher than carbon prices. The country allocated a net total of US\$4.5 billion in fossil fuel subsidies in 2022 alone (indicator 4.3.3).



In 2021, fossil fuels still accounted for 94% of all road transport energy, and electricity accounted for only 0.2%. Despite a slight decline in 2021, the use of biofuels has been slowly increasing over time, accounting for nearly 6% of transport energy in 2021 (indicator 3.1.3).

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.



Use of renewable energy has grown steadily in recent years, contributing 32% of total electricity output but only 6% of total energy supply in 2022. Despite a downward trend in the share of total energy coming from coal from 1990-2020, this share increased the following two years, with coal providing 21% of energy in 2022 (indicator 3.1.1).

## Diet and health

Promoting shifts to healthier, more plant-based diets can substantially reduce agricultural GHG emissions, while also delivering major co-benefits for public health through improvements to dietary risk factors and reduced deaths due to unbalanced diets.

**33%**

In 2021, over 79,700 deaths were associated with excessive consumption of red meat and dairy, and over 83,700 were associated with low consumption of nutritious, plant-based foods. Together, these accounted for 68% of all diet-related deaths that year (indicator 3.3.2).



In 2021, consumption of red meat and dairy led to emissions of 0.54 CO<sub>2</sub>e per person, 59% of total emissions using consumption-based accounting. In that year, production of red meat and dairy led to emissions of 0.55 CO<sub>2</sub>e per person, accounting for 64% of all agriculture production-related emissions (indicator 3.3.1).

## Vulnerability to infectious disease

There is a rising trend in tick climatic suitability. *Ixodes ricinus* ticks are the dominant European tick species associated with the transmission of pathogens, including for *Borrelia burgdorferi* causing Lyme disease and tick-borne encephalitis.



Germany witnessed an increase in months suitable for *Ixodes ricinus* nymph feeding activity when comparing 1951-60 with 2013-22, extending the period of suitable activity by 0.69 months from 5.19 to 5.88 months (indicator 1.3.6).\*\*

## Healthcare sector emissions and harms

Quality healthcare requires the use of energy, goods, services, and infrastructure, which consumes resources and currently contributes to GHG emissions and air pollution. Delivering low-GHG-emitting and sustainable health systems is essential in a world that meets the goals of the Paris Agreement and enables a healthy future.



Greenhouse gas emissions from Germany's healthcare system have been trending up since 2010, reaching an all-time high in 2021 at 68 metric tons of carbon dioxide equivalent (indicator 3.5).

FOR FURTHER INFORMATION, VISIT [WWW.LANCETCOUNTDOWN.ORG](http://WWW.LANCETCOUNTDOWN.ORG)

\* Romanello M, Walawender M, Hsu SC et al. The 2024 report of the Lancet Countdown on health and climate change: Facing record-breaking threats from delayed action. Lancet 2024; published online October 2024. [https://doi.org/10.1016/S0140-6736\(24\)01822-1](https://doi.org/10.1016/S0140-6736(24)01822-1)

\*\* van Daaler KR, Tonne C, Semenza JC et al. The 2024 Europe report of the Lancet Countdown on health and climate change: Unprecedented warming demands unprecedented action. The Lancet Public Health. [https://doi.org/10.1016/S2468-2667\(24\)00055-0](https://doi.org/10.1016/S2468-2667(24)00055-0)