LANCET COUNTDOWN: HEALTH AND CLIMATE CHANGE IN EUROPE

SWEDEN

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
DATA SHEET 2024

Health and climate change in Sweden

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 Sweden, which reveal that:

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

The persistent net **subsidising of fossil fuels** of billions of dollars restricts funds available for health-supportive services, and hampers a transition towards clean, zero-emission energy.

Even countries with cold climates like Sweden are experiencing **the impacts of heat**, with the country seeing potential loss of labour hours and income due to heat.

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.

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.

In 2022, low carbon sources (including renewables) accounted for the largest portions of electricity at 90.8% and 49.6% of total energy supply. The use of renewable energy has grown steadily since 2000, contributing to 20% of electricity output but only 6.6% of total energy supply. Coal use has trended downward, with almost no contribution to electricity supply, and 3.2% to total energy supply (indicator 3.1.1).

In 2021, renewables and electricity contributed 35% and 50% of household energy supply, with renewable energy use on an increasing upward trend from 2000. Notably, fossil fuels decreased from 2000, accounting for 3% of household energy in 2021. However, biomass use slightly increased to 11.3% in 2021 (indicator 3.1.2).

HEALTH IMPACTS OF AIR POLLUTION

In 2021, there were approximately 31 deaths per 100,000 attributable to anthropogenic air pollution ($PM_{2.5}$) (indicator 3.2.1).

37% Fossil fuels (coal and liquid gas) contributed to 37% of these deaths (indicator 3.2.1).

US$12 billion was the monetised value of premature mortality due to anthropogenic air pollution in 2021 was (indicator 4.1.4).

Fossil fuel use for road transport energy had decreased from 100% in 2000 to 76% in 2021, while biofuels and electricity use accounted for a combined 24% in 2021 (indicator 3.1.3).

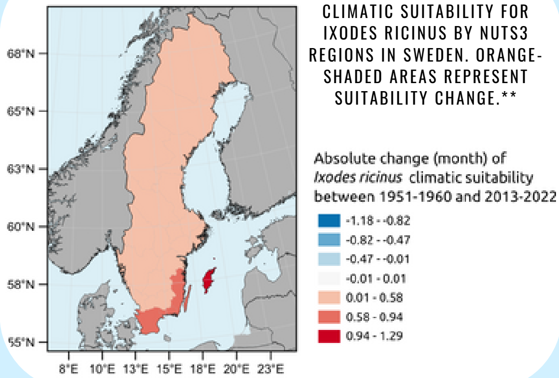
Carbon prices help economies transition away from high-carbon fuels, whereas fossil fuel subsidies provide incentives for health-harming emissions and slow the low-carbon transition. Redirecting fossil fuel subsidy funds to incentivising the expansion and affordability of low-carbon power and to health-promoting interventions would deliver net benefits to local populations and support a just transition.

$1.5bn In 2022, Sweden had a net-negative carbon revenue, indicating that fossil fuel subsidies were higher than carbon prices. The country allocated a record net total of over US$1.5 billion in fossil fuel subsidies (indicator 4.3.3).

Vulnerability to vector-borne disease

Although there are multiple tick species associated with the transmission of pathogens, *Ixodes ricinus* ticks are the dominant European vectors, including for *Borrelia burgdorferi* causing Lyme disease and tick-borne encephalitis—two of the most prevalent vector-borne illnesses in the northern hemisphere.

Sweden 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 0.46 months from 2.95 to 3.41 months (indicator 1.3.6).**



CLIMATIC SUITABILITY FOR IXODES RICINUS BY NUTS3 REGIONS IN SWEDEN. ORANGE-SHADED AREAS REPRESENT SUITABILITY CHANGE.**

Marine food security

Climate change is exacerbating food insecurity and undernutrition by reducing crop yields, labour capacity, and access to water and sanitation, disrupting supply chains, and compromising marine resources through higher coastal sea surface temperatures, reduced oxygenation, ocean acidification, and coral reef bleaching.

0.9°C

From 2021-2023, average coastal temperature exceeded the 1981-2010 average 0.9°C (indicator 1.4.2). This shift underscores the threat to marine food security induced by climate change.

Tree cover loss

Trees and forests are crucial carbon sinks and biodiversity reservoirs. Poor tree cover and forest conservation exacerbates climate change, and increases the risk of forest fires, zoonotic diseases, and allergies.

Between 2018-2022, Sweden lost 1.6 million hectares of forest cover, 5.8% of the country's area of forest cover in 2000. Between 2001-2022, Sweden lost the 13th most forest cover of any country in the world (in absolute hectares lost), accounting for forestry activities, agriculture, wildfires and commodity-driven deforestation (indicator 3.4).

Heat and health

With increasing global temperatures due to climate change, even countries with cold climates like Sweden are experiencing the impacts of heat. Heat exposure limits labour productivity, which undermines livelihoods and the social determinants of health.

In 2013-2022, Sweden's overall mean increase in heat-related deaths was estimated to be 9 deaths per 100,000 inhabitants rising from 12 in 2003–12 to 21 in 2013–22 (indicator 1.1.4).**

From 2014-2023, each infant and adult over age 65 was exposed to an average of 10 heatwave days per year (indicator 1.1.1).

From 2014-2023, the total number of heatwave days experienced annually by children under the age of one was 118% greater than the equivalent demographic from 1986-2005. Adults over age of 65 experienced 123% across the same time frame (indicator 1.1.1).

ECONOMIC IMPACT OF HEAT

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

US$8.3 million was the potential income loss from labour capacity reduction due to heat in 2023 (indicator 4.1.3).

320,000 potential labour hours were lost due to heat exposure in 2023 (indicator 1.1.3).

Construction workers were hit the hardest, seeing 75% of the potential hours lost (indicator 1.1.3) and 77% of the potential income losses in 2023 (indicator 4.1.3).

From 2014-2023, individuals were exposed to a moderate or higher risk of heat stress for over 2400 hours per year during moderate outdoor physical activity (like running) (indicator 1.1.2).

FOR FURTHER INFORMATION, VISIT **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

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