

UNITED ARAB EMIRATES

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
DATA SHEET 2023

Health and climate change in the UAE

The *Lancet* Countdown on Health and Climate Change is an academic collaboration of over 200 researchers from around the world, which annually takes stock of the evolving links between health and climate change through 40+ peer-reviewed indicators. Since 2016, these indicators have provided regular, reliable global and regional stocktakes on climate change and health. This document summarises key findings from the 2023 Report of the *Lancet* Countdown* for the UAE, 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.



Unhealthy diets are contributing to greenhouse gas (GHG) emissions and undermining health and wellbeing. Deaths attributable to dietary risks could be reduced through balanced, low-emission diets.



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

These findings underline the urgency of strengthening local health systems, adapting to climate change, and pursuing efforts to reduce greenhouse gas emissions through interventions that simultaneously deliver health co-benefits. These actions will help build healthier, more resilient populations, and forge the way to a thriving future for the UAE.

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 women, and those with underlying health problems are particularly at risk.

1.3°C

From 2018 to 2022, the average summer temperatures that people were exposed to were 1.3°C higher than the 1986–2005 baseline average (indicator 1.1.1).



From 2013–2022, children under the age of one were exposed to 7.7 times as many heatwave days annually than the equivalent demographic were on average from 1986–2005. Adults over age 65 were exposed to 12.3 times as many across the same timeframe (indicator 1.1.2).



From 2013–2022, each infant was exposed to an average of 9.3 life-threatening heatwave days per year, while adults over age 65 were exposed to 9.4 days per year (indicator 1.1.2).

ECONOMIC IMPACT OF HEAT

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

1.5 billion potential labour hours lost due to heat exposure in 2022, an increase of 350% from 1991–2000 (indicator 1.1.4).

US\$18.2 billion potential associated income loss in 2022, equivalent to 3.6% of GDP (indicator 4.1.3).



Construction workers were hit the hardest, seeing 62.2% of the potential hours lost and 69.5% of the potential income losses in 2022 (indicators 1.1.4 & 4.1.3).

FUTURE PROJECTIONS

2°C SCENARIO

In a scenario in which temperatures are kept to under 2°C of heating, heatwave exposure for people over age 65 is projected to be 14 times greater by mid-century (2041–2060 average) (indicator 1.1.2).

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.

83%

In 2020, red meat and dairy accounted for nearly 83% of all agricultural production-related emissions and nearly 82% of all consumption-related emissions in 2020.



In 2020, over 1,100 deaths were associated with excessive consumption of dairy, red meat, and processed meat. Another 4,500 deaths were attributable to insufficient consumption of nutritious plant-based foods (indicator 3.3.2).

Air pollution, energy transition and health co-benefits

The low adoption of clean renewable energy and 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. All of these lead to increasing demand on care services. The health impacts of fuel-derived air pollution could be avoided by transitioning to zero-carbon energy systems. This would also contribute to climate change mitigation.

\$5.2bn

The UAE had a net-negative carbon revenue in 2020, indicating that fossil fuel subsidies were higher than carbon prices, for a net total of US\$5.2 billion in fossil fuel subsidies in 2020 alone (indicator 4.2.4).

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.

RENEWABLE ENERGY TRANSITION

3X

In 2020, CO₂ fuel combustion emissions (ktCO₂) were 6% lower than in 2016, when emissions peaked. However, fuel combustion emissions are still 3 times higher than in 1992 (indicator 3.1.1).



In 2020, the carbon intensity of the UAE's energy system was 2.7% lower than the prior year, but was only 13.2% lower than 1992, the year the UNFCCC was adopted (indicator 3.1.1).

0.7%

Renewable sources of energy made up only 0.7% of total energy supply in 2020, while coal still accounted for 2.6% (indicator 3.1.1).

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.

Sea level rise and health

Sea level rise can affect human health through episodic flooding, permanent inundation, erosion, soil and drinking water contamination, vector- and water-borne disease, and mental health impacts, with populations living less than 1 metre above sea level particularly vulnerable.



In 2022, over 600,000 people were living less than 1 metre above sea level (indicator 2.3.3).

Without sufficient adaptation measures, sea level rise could prompt relocation of vulnerable populations. The health impacts of human relocation will depend on the policies put in place to protect the health of migrant or immobile populations.

FOR FURTHER INFORMATION, VISIT:
WWW.LANCETCOUNTDOWN.ORG

*Romanello M, di Napoli C, Green C et al. The 2023 report of the *Lancet* Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. *Lancet* 2023; published online Nov 14. [https://doi.org/10.1016/S0140-6736\(23\)01859-7](https://doi.org/10.1016/S0140-6736(23)01859-7).

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