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Editorial

The escalating health toll of climate change

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The relationship between climate change and human health is now well established in the scientific literature. Rising temperatures, shifting precipitation patterns, and the increasing frequency of extreme weather events are producing measurable adverse health outcomes, including heat-related illness, the geographic expansion of vector-borne diseases, and disruptions to food and water security. Despite a growing body of evidence documenting these effects, the pace of coordinated global response has not kept up with the scale of the challenge.

The 2025 report of the Lancet Countdown on Health and Climate Change produced in collaboration with the World Health Organization and authored by 128 multidisciplinary experts from 71 institutions, could not be clearer in its verdict. Twelve of 20 key indicators tracking health threats have reached record levels. (1)

Heat is the most immediate and measurable of climate change's health harms. Extreme heat strains the cardiovascular and respiratory systems, accelerates kidney disease, and overwhelms the body's thermoregulatory capacity.

The World Health Organization has projected that climate change will cause approximately 250,000 additional deaths per year between 2030 and 2050 due to malnutrition, malaria, diarrhea, and heat-related illness alone. These are not worst-case projections. They are conservative estimates, based on current trajectories that are themselves accelerating. (2)

Particularly alarming is the evidence on heat and occupational health. As temperatures rise across the tropics and subtropics, outdoor workers, farmers, construction workers, and sanitation workers face new and intensifying threats. For countries like Sri Lanka, where the economy depends heavily on outdoor agricultural labour, this is not a distant hazard; it is a present emergency.

Rising temperatures and shifting rainfall patterns are dramatically altering the habitats and behaviour of disease-carrying vectors, mosquitoes that carry dengue, chikungunya, Lyme disease, and dozens of other pathogens. For dengue, the picture is equally troubling. The global average transmission potential of dengue has risen by up to 49% since the 1950s. Research has found a 13 percent increase in dengue risk for every 1°C rise in temperature in tropical and subtropical regions. In addition, the floodwaters contaminate drinking water supplies, creating conditions for outbreaks of typhoid and other gastrointestinal diseases. (3)

Climate change, driven by rising atmospheric carbon dioxide (CO_2), is both a direct and an indirect contributor to malnutrition. Indirectly, climate change threatens food security by reducing food access and availability through mechanisms such as climate-related conflicts, food price volatility, extreme weather events, rising temperatures, declining pollinator populations, and increased post-harvest losses. In addition to these well recognized pathways, elevated atmospheric CO_2 directly affects human nutrition by altering the nutrient composition of food crops. Higher CO_2 concentrations can increase carbohydrate accumulation while reducing the concentrations of essential nutrients such as protein, iron, zinc, and other micronutrients in staple crops. (4)

Women, children, older adults, people with pre-existing health conditions, and those living in poverty face compounded vulnerability. A dozen systematic reviews confirmed that the health impacts of climate change fall disproportionately on socially marginalised populations, who have fewer resources to adapt and less protection when systems fail. (5)

This is not merely a public health problem. It is a profound moral failure. The communities suffering the most severe consequences of climate change had the smallest role in causing it. Any serious international response to the climate-health crisis must centre equity

in financing, in adaptation support, and in the design of health systems that can serve the most vulnerable. (6)

The path forward is not mysterious. It is a matter of political will. Reducing greenhouse gas emissions at the pace required by the Paris Agreement, limiting warming to 1.5°C, is the single most powerful intervention available to prevent premature death on a global scale. Health must be placed at the centre of climate negotiations, not treated as a secondary concern after energy and economics. (7)

Adaptation investments in health systems are urgently needed: heat action plans, expanded vector control programmes, early warning systems for extreme weather, and climate-resilient water and sanitation infrastructure. Millions of preventable deaths are the cost of inaction. The question before policymakers, financiers, and citizens is not whether we can afford to act. It is whether we are willing to bear the consequences of not acting.

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