

## Understanding the global landscape of disease burden in the context of climate change

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This essay provides an overview of recent research findings on understanding the global landscape of disease burden in the context of climate change. The interplay between climate change and disease burden is complex and multifaceted, with various factors contributing to the emergence and spread of infectious and non-communicable diseases. Highest risk for poor CVD outcomes from air pollution exist in racial/ethnic minorities, especially in blacks compared to whites in the U.S, those at low SES, elderly populations, women, those with certain comorbid conditions and developing countries compared to developed countries. However, findings are less consistent for urban compared to rural populations. In the U.S., the National Institutes of Health commit 0.025 % of their annual research budget to climate change and health. The European Union Seventh Framework Programme committed 0.08 % of the total budget to climate change and health; the amount committed under Horizon 2020 was 0.04 % of the budget. Two issues apparently contributing to this mismatch are viewing climate change primarily as an environmental problem, and therefore the responsibility of other research streams; and narrowly framing research into managing the health risks of climate variability and change from the perspective of medicine and traditional public health. The essay explores the impact of climate change on vector-borne, waterborne, and foodborne diseases, as well as respiratory diseases and heat-related illnesses.

Vulnerable populations, including developing countries and indigenous communities, face disproportionate health risks. The essay highlights mitigation and adaptation strategies, public health interventions, climate-resilient healthcare, policy and advocacy efforts.

**Liza Nagarkoti** holds a Master in Food and Nutrition and a BSc in Nursing. She has worked as an Emergency Nurse for more than six years. An impassioned Emergency Nurse hailing from Nepal, she is driven by a fervent commitment to unravel the intricate relationship between climate change and global disease burden. Her research delves into the complexities of this intersection, emphasising the heightened vulnerabilities of communities in developing countries and indigenous regions. Having witnessed preventable climate-related illnesses firsthand, her mission is to bridge the gap between awareness and actionable change.

