

The Impact of Climate Change on Health: Reducing Risks and Increasing Resilience in the Era of COVID-19

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Executive Summary

The climate crisis has many consequences – among them **widespread health impacts** that will lead to immense societal, ecological, and economic harm.

Over the past two decades multiple large-scale reviews on climate change and health have made clear the need for a multi-sectoral approach to target the drivers and impacts of climate change, biodiversity loss, and ecosystem degradation. Despite this abundance of scientific evidence underscoring urgency of action, policy implementation responses lag behind. Even at COP26, itself delayed due to an ongoing pandemic, health continues to be considered by many countries a problem independent from climate and environment.

Recent findings indicate the scale of the problem:

Risk. Once viewed as a future impact, climate change has now been linked to dozens of extreme weather events and temperature anomalies. These have both direct and indirect effects on health, and are posing elevated risk across many impact areas: infectious disease, cardiovascular health, mental health, malnutrition, respiratory health, and others. Anthropogenic activities which have caused climate change and the sixth extinction crisis are simultaneously weakening ecosystems, resulting in an increased risk of disease spillover and reducing capacity to mitigate the impact of extreme weather and heat. Uncertainty associated with climate change also puts food systems at risk globally - heat and precipitation have direct impact on crops, warming oceans influence fish stocks, and changes in local weather threaten pollinators.

Burden. By the end of the century, the yearly burden of temperature-related mortality alone is projected to nearly match the current impact of obesity: reaching 4.6 million annual deaths, or 6th on the 2017 Global Burden of Disease risk factor list. This is *in addition to* air pollution illness and deaths, as well as the wide range of other direct and indirect impacts of climate change not yet systematically evaluated for global burden - from climate-sensitive infectious diseases to food and water insecurity, famine, forced migration, conflict, and flooding. It is clear the disease and death toll of climate change will be higher than what health systems are prepared for today. This burden will be disproportionately experienced by the poor and worsen gender inequalities.

Missed opportunity. The importance of protecting ecosystems and better understanding ecosystem-human dynamics has been made abundantly clear by the COVID-19 pandemic. We are missing an opportunity for climate action, biodiversity conservation, food security, economic stability, and pandemic risk reduction. We are losing carbon sinks, increasing spillover potential for the next pandemic, and diminishing the ecosystem services we depend on for our health. And we are doing all so while missing an opportunity to bring collective solutions toward the achievement of the Sustainable Development

Goals. The limited inclusion of health considerations in climate policies results in hidden externalities generally expected to be magnitudes higher in response cost compared to what would be required for prevention.

Climate change stands to also exacerbate other growing global health challenges, such as those risks posed by antimicrobial resistance (AMR) and non-communicable diseases. While the physical impacts of climate change on infrastructure are the most direct and visible, the health impacts of climate inaction will create a pandemic of climate-induced health impacts- one which no vaccine can solve. At the same time, it is becoming increasingly clear that the health sector is not only highly vulnerable to the impacts of climate change, but it is also a significant emitter of greenhouse gases, representing at least 4.4% of net global emissions. **It should seem obvious that the necessary transition to prepared and resilient health systems must also be a green and climate-smart one.**

Some countries, like the UK, are already taking action with strong health sector leadership to reduce emissions. However, a major shift in practice, resourcing, and priorities will be needed to effectively mitigate and adapt to the health risks and consequences of climate change. This paper emphasizes multi-sectoral “One Health” and “Planetary Health” approaches to reduce climate change-related health impacts. Recommendations:

1. Mainstream health into climate change and biodiversity agendas and fund health programs within the United Nations Framework Convention on Climate Change, ensuring technical agencies can support implementation of the Rio Conventions and meet targets agreed to in the Paris Climate Accords and forthcoming Global Biodiversity Framework Targets.
2. Integrate health impact assessment in all development project appraisals and implement appropriate safeguards, with attention to acute and long-term climate-associated effects.
3. Assess and quantify the health co-benefits of proposed environmental investments (e.g. REDD+) to optimize resources, minimize potential trade-offs, and make the health value of mitigation-focused interventions visible.
4. Expand health prevention-related investments in policy, research, and practice in nature-based solutions that have climate, economic, and ecosystem co-benefits.
5. Commit to making climate-smart human and animal health systems universal, including by building in energy efficiency targets by development institutions as part of COVID-19 recovery efforts.
6. Incorporate environmental considerations into multi-sectoral coordination mechanisms (such as One Health platforms) to better align National Action Plans on Health Security and AMR with National Adaptation Plans.
7. Support widespread access to and behavior change for uptake of individual self-protection and risk reduction measures to lessen the occurrence and impact of disease.
8. Increase application of existing climate and health forecasting tools and early warning systems for human and animal health (such as those promoted by the WMO-WHO joint office) and the use of climate data for health at national, regional, and subnational levels.
9. Increase overall prominence of climate considerations in health security priorities and financing, including through the forthcoming Global Plan of Action for One Health, within WHO to mainstream climate across programs.
10. Strengthen the management capacity of relevant government ministries to implement policies and generate technologies to address climate change and climate-sensitive health impacts.