

# The Impact of Climate Change on Global Health: A Call for Urgent Action

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## The Growing Threat of Climate Change

Climate change is increasingly recognized as one of the most pressing global health challenges of our time. As the World Health Organization (WHO) has stated, climate change is the single greatest threat facing humanity, with profound implications for health systems worldwide. The impacts are both direct and indirect, affecting everything from heat-related illnesses to the spread of infectious diseases. Research indicates that climate change could lead to approximately 250,000 additional deaths per year between 2030 and 2050 due to undernutrition, malaria, diarrhea, and heat stress alone.<sup>1</sup>

The climate crisis acts as a health-risk multiplier, exacerbating existing health disparities and disproportionately affecting vulnerable populations, including women, children, the elderly, and those living in poverty. Extreme weather events—such as heatwaves, floods, and wildfires—are becoming more frequent and severe, leading to increased morbidity and mortality rates globally.<sup>1</sup> Furthermore, the WHO estimates that without immediate action, at least 21 million people could die from climate-related health impacts by 2050.<sup>1</sup>

## Urgency of Addressing Health Impacts

The urgency of addressing the health impacts of climate change cannot be overstated. Current projections suggest that climate change will push an additional 132 million people into extreme poverty by 2030, with significant implications for health outcomes. The degradation of environmental determinants of health—such as clean air, safe drinking water, and adequate nutrition—compounds these challenges, leading to a situation where health systems are increasingly strained and unable to cope with rising demands.

To avert catastrophic health impacts and prevent millions of climate-related deaths, it is essential to limit global temperature rise to 1.5°C above pre-industrial levels.

This requires immediate and transformative action across all sectors. The Intergovernmental Panel on Climate Change (IPCC) emphasizes that deep, rapid reductions in greenhouse gas emissions are crucial for mitigating these risks.<sup>1</sup>

## Key Areas for Action:

**Strengthening Health Systems:** Health systems must be made climate-responsive and resilient to withstand the increasing burden posed by climate change.

This includes integrating climate considerations into health planning and ensuring access to healthcare during climate-related emergencies.

## Promoting Sustainable Practices:

Transitioning to sustainable energy sources and promoting healthier lifestyles can mitigate both climate change and its health impacts. For instance, investing in clean energy not only reduces emissions but also improves air quality and public health outcomes.<sup>2</sup>

**Addressing Inequities:** It is vital to prioritize vulnerable populations in climate action plans. Those most affected by climate change often contribute the least to its causes; thus, equity must be at the forefront of any strategy aimed at combating its effects.<sup>2</sup>

## Understanding the Health Risks of Climate Change

### Rising Temperatures and Heat-Related Illnesses

Rising global temperatures are leading to an increase in heat-related illnesses and deaths. The World Health Organization (WHO) estimates that climate change will cause approximately 250,000 additional deaths annually between 2030 and 2050 due to heat stress, undernutrition, malaria, and diarrhea.<sup>3</sup> Extreme heat events are becoming more

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frequent, posing significant risks to vulnerable populations, particularly outdoor workers. Over 2.4 billion workers are expected to be exposed to excessive heat, resulting in millions of lost workdays and increased morbidity.<sup>4</sup>

### **Spread of Infectious Diseases**

Climate change is altering the patterns of infectious disease transmission. Warmer temperatures can expand the habitats of vectors such as mosquitoes and ticks, increasing the incidence of diseases like malaria, dengue fever, and Lyme disease. The WHO warns that climate change could lead to more frequent outbreaks of infectious diseases due to these shifts in vector behavior and distribution. Additionally, changes in precipitation patterns can exacerbate waterborne diseases by affecting water quality and availability.<sup>5</sup>

### **Air Quality and Respiratory Health**

Deteriorating air quality due to climate change poses serious risks for respiratory health. Increased temperatures can lead to higher levels of ground-level ozone, which aggravates conditions such as asthma and chronic obstructive pulmonary disease (COPD). The International Labour Organization (ILO) reports that outdoor workers are particularly vulnerable, with up to 860,000 deaths annually attributed to work-related air pollution.<sup>6</sup> Moreover, rising temperatures can exacerbate wildfires, further deteriorating air quality and increasing respiratory ailments.

### **Food and Water Insecurity**

Climate change significantly impacts food security through altered agricultural productivity and increased frequency of extreme weather events. Droughts and floods can lead to crop failures, resulting in malnutrition and food scarcity. The World Bank projects that climate change could push an additional 132 million people into extreme poverty by 2030 due to its effects on food systems. Water insecurity is also a critical issue; changing precipitation patterns can lead to both droughts and flooding, compromising access to safe drinking water and sanitation facilities.<sup>7</sup>

### **Vulnerable Populations at Greater Risk The Disproportionate Impact on Low-Income Communities**

Low-income communities are disproportionately affected by the health impacts of climate change. These populations

often lack the resources needed to adapt to changing environmental conditions or recover from climate-related disasters. The WHO highlights that while everyone is exposed to climate-related health threats, marginalized groups face greater risks due to systemic inequalities.<sup>8</sup>

### **Children, Elderly, and Chronic Illness Patients**

Certain demographic groups are more vulnerable to the health risks associated with climate change. Children are particularly susceptible due to their developing bodies and reliance on adults for care. The elderly often have pre-existing health conditions that make them more sensitive to extreme weather events. Similarly, individuals with chronic illnesses may find their conditions exacerbated by climate-related stressors such as poor air quality or heatwaves.<sup>9</sup>

### **Geographic Regions Facing Higher Risks**

Geographic regions that are already vulnerable—such as low-lying coastal areas and regions prone to extreme weather—face heightened risks from climate change. Developing countries contribute minimally to global emissions but bear the brunt of climate-related health impacts. The WHO notes that the death rate from extreme weather events in these regions is significantly higher compared to less vulnerable areas.<sup>8</sup> As climate change continues to progress, these disparities are likely to worsen unless comprehensive action is taken globally.

### **The Economic and Social Implications of Climate-Related Health Issues**

#### **Strain on Healthcare Systems**

Climate change is placing unprecedented strain on healthcare systems globally. As extreme weather events become more frequent, health services are increasingly overwhelmed by the rising demand for care related to climate-induced illnesses. The WHO emphasizes that climate change exacerbates existing health conditions, leading to increased hospitalizations and emergency room visits, which can overwhelm already strained healthcare infrastructures.<sup>10</sup> Furthermore, the economic burden of climate-related health issues is expected to escalate, as healthcare systems must adapt to the growing prevalence of diseases linked to climate change.

### **Economic Burden of Climate-Related Diseases**

The economic implications of climate-related health issues are substantial. The cost of treating diseases exacerbated by climate change—such as respiratory illnesses from poor air quality and vector-borne diseases like malaria—can significantly impact national economies. A study published in JAMA Network Open highlights that the financial burden on healthcare systems could reach billions annually if proactive measures are not taken.<sup>11</sup> Additionally, lost productivity due to illness further compounds these economic challenges, particularly in low-income communities that may lack adequate resources for prevention and treatment.

### **Social Inequality and Health Disparities**

Climate change exacerbates social inequalities and health disparities. Vulnerable populations—such as low-income communities, children, and the elderly—bear the brunt of climate-related health impacts due to their limited access to healthcare and resources for adaptation.<sup>12</sup> The WHO reports that marginalized groups often face higher exposure to environmental hazards, leading to increased morbidity and mortality rates.<sup>10</sup> This inequity underscores the need for targeted interventions that address both health and social determinants.

### **Role of Health Professionals and Policy Makers**

#### **Healthcare Sector's Role in Climate Advocacy**

Health professionals are uniquely positioned to advocate for climate action due to their trusted status within communities. They play a critical role in raising awareness about the health risks associated with climate change and can influence policy decisions at local, national, and international levels.<sup>4</sup> Engaging in advocacy allows healthcare providers to address both immediate health concerns and the broader implications of climate change on public health.

#### **Creating Policies for Climate-Health Interventions**

Policy makers must prioritize the integration of climate considerations into public health strategies. This includes developing policies that promote sustainable practices within

healthcare systems while simultaneously addressing the root causes of climate-related health issues.<sup>4</sup> Collaborative efforts between health professionals and policymakers can lead to more effective interventions that protect vulnerable populations from the adverse effects of climate change.

### **Encouraging International Collaboration**

International collaboration is essential for addressing the global nature of climate change. Health professionals can facilitate partnerships across borders to share best practices and resources for mitigating health impacts.<sup>4</sup> By fostering a global dialogue on climate-health intersections, stakeholders can work together to implement solutions that benefit populations worldwide.

### **Innovative Solutions and Adaptation Strategies**

#### **Technological Advances in Climate-Related Health Monitoring**

Technological innovations are crucial for monitoring the health impacts of climate change. Advances in data collection and analysis can help identify emerging health threats linked to environmental changes.<sup>5</sup> For instance, using remote sensing technology can enhance surveillance of vector-borne diseases, allowing for timely interventions.

### **Building Climate-Resilient Health Systems**

Developing climate-resilient healthcare systems is vital for mitigating the effects of climate change on public health. This involves investing in infrastructure that can withstand extreme weather events while ensuring that essential services remain operational during crises.<sup>3</sup> The WHO emphasizes the importance of integrating sustainability into healthcare practices to reduce carbon footprints while enhancing resilience.

### **Community Education and Preparedness**

Community education plays a pivotal role in preparing populations for climate-related health risks. Public health campaigns that inform individuals about preventive measures can empower communities to take action against climate impacts. Training healthcare workers in disaster preparedness ensures that they are equipped to respond effectively during emergencies.

### Call to Action: A Collective Responsibility The Need for Immediate Action and Funding

Immediate action is necessary to address the urgent health impacts of climate change. Increased funding for research, infrastructure development, and public health initiatives is essential for building resilience against future challenges. Mobilizing financial resources will enable communities to implement effective adaptation strategies.

### Strengthening Global Commitment to Sustainable Practices

A collective commitment to sustainable practices is crucial for mitigating the effects of climate change on public health. Governments must prioritize environmental sustainability within their policies while promoting practices that reduce greenhouse gas emissions.<sup>13</sup> This commitment will not only protect public health but also contribute to a healthier planet.

### Empowering Individuals and Communities

Empowering individuals and communities is essential for fostering resilience against

climate-related health threats. By providing education and resources, communities can better prepare for and respond to environmental changes.<sup>1</sup> Encouraging grassroots movements will amplify voices advocating for sustainable practices at local levels.

### Conclusion

The intersection of climate change and global health presents a critical challenge that demands immediate and collaborative action. This is not only about environmental preservation but also safeguarding human rights and health equity. The risks are severe and wide-ranging, with vulnerable populations facing the heaviest burden. To prevent the erosion of global health gains and growing inequalities, we must prioritize public health within climate strategies. Only through unified efforts can we build a healthier, more sustainable future, where addressing climate change is recognized as our shared responsibility.

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