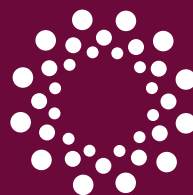


Position Paper:

Protecting Health in a Changing Climate

September 2025



European
Society of
Medicine

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Executive Summary



Climate change represents the greatest health threat of the 21st century, with far-reaching implications for human health across Europe and globally. The [European Society of Medicine](#) recognizes the urgent need for coordinated action to protect public health from the escalating risks posed by our changing climate. This position paper outlines the multifaceted health impacts of climate change, identifies vulnerable populations, and provides evidence-based recommendations for healthcare systems, policymakers, and medical professionals.

The evidence is clear: climate change is already affecting human health through increased heat-related mortality, changing patterns of infectious diseases, compromised air quality, and threats to food and water security. [The European Environment Agency](#) has documented significant climate-related health risks across Europe, with heat-related deaths and vector-borne diseases showing concerning upward trends.

Our key recommendations include: strengthening healthcare system resilience, integrating climate considerations into all health policies, enhancing surveillance systems for climate-sensitive health outcomes, promoting sustainable healthcare practices, and ensuring equitable protection for vulnerable populations. Healthcare professionals must be equipped with the knowledge and tools to address climate-related health risks while advocating for systemic changes that protect both human and planetary health.

Key Points



- Climate change is a health emergency: Rising temperatures, extreme weather events, and environmental degradation are already causing increased mortality, morbidity, and healthcare system strain across Europe.
- Vulnerable populations face disproportionate risks: Children, elderly individuals, and marginalized communities experience greater exposure to climate health hazards and have fewer resources for protection and adaptation.
- Healthcare systems must transform rapidly: Medical infrastructure, workforce training, and care delivery models require immediate adaptation to address current climate health risks while reducing the sector's environmental footprint.
- Coordinated action is essential: Protecting health from climate change demands integration across healthcare, policy, research, and community sectors, with healthcare professionals serving as advocates for both patient care and planetary health.

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Introduction



The relationship between environmental conditions and human health has been recognized since ancient times, but the scale and pace of current climate change present unprecedented challenges for public health systems worldwide. The Intergovernmental Panel on Climate Change (IPCC) has unequivocally stated that human activities are warming the planet at a rate not seen in thousands of years, with profound implications for human health and well-being.

Climate change affects health through multiple pathways: direct effects from extreme weather events, indirect effects through ecosystem disruption, and broader societal impacts including conflict, displacement, and economic instability. The European Society of Medicine, representing thousands of healthcare professionals across Europe, recognizes that protecting health in this context requires both immediate adaptation measures and long-term mitigation strategies.

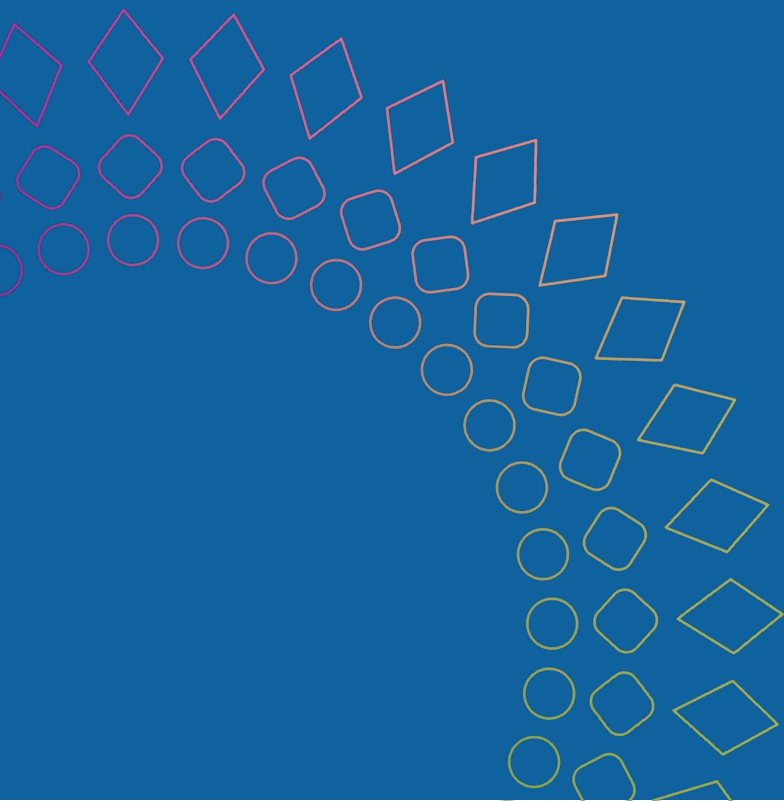
This position paper builds upon the growing body of evidence demonstrating the health impacts of climate change and the urgent need for healthcare system transformation. Protecting public health from climate and ecological crises must be at the center of government policy and action.

Primary Objectives

1. Protect populations from climate health risks
2. Build resilient and sustainable healthcare systems
3. Advance health-centered climate action

1

Health Impacts of Climate Change



Direct Health Impacts of Climate Change



Heat-Related Health Effects

Rising global temperatures pose immediate and severe risks to human health. Heat-related mortality has become one of the most documented health impacts of climate change in Europe. Extreme heat events cause cardiovascular stress, heat exhaustion, heat stroke, and exacerbation of chronic conditions including diabetes, kidney disease, and respiratory disorders.

The elderly, individuals with pre-existing health conditions, outdoor workers, and socially isolated populations face disproportionate risks during heat waves. Urban heat island effects amplify these risks in densely populated areas, where temperatures can be several degrees higher than surrounding rural areas. The 2003 European heat wave, which caused over 70,000 excess deaths, serves as a stark reminder of the lethal potential of extreme heat events.

Extreme Weather Events

Climate change is increasing the frequency and intensity of extreme weather events including floods, droughts, storms, and wildfires. These events cause immediate injuries and deaths, but their health impacts extend far beyond the acute phase. Flooding can contaminate water supplies, damage healthcare infrastructure, and increase the risk of waterborne diseases. Wildfires generate harmful air pollutants that can travel hundreds of kilometers, affecting respiratory health across vast areas.

Mental health impacts from extreme weather events are profound and long-lasting. Survivors of climate disasters experience increased rates of post-traumatic stress disorder, anxiety, depression, and suicide. Communities may face disrupted social networks, economic hardship, and prolonged displacement, all of which compound mental health challenges.

Air Quality Degradation

Climate change affects air quality through multiple mechanisms. Higher temperatures increase ground-level ozone formation, while changing precipitation patterns affect particulate matter concentrations. Wildfires, becoming more frequent and severe due to drier conditions, release vast quantities of harmful pollutants including fine particulate matter (PM_{2.5}), carbon monoxide, and volatile organic compounds.

Poor air quality is linked to cardiovascular disease, respiratory conditions including asthma and chronic obstructive pulmonary disease (COPD), stroke, and premature death. Children, elderly individuals, and those with pre-existing respiratory or cardiovascular conditions are particularly vulnerable to air pollution health effects.

Indirect Health Impacts



Food Security and Nutrition

Climate change threatens global food security through multiple pathways that directly impact human nutrition and health. Rising temperatures, changing precipitation patterns, and increased frequency of extreme weather events are reducing crop yields and altering the nutritional content of staple foods. Heat stress and drought conditions decrease productivity of major crops including wheat, rice, and maize, while elevated atmospheric CO₂ levels reduce protein and micronutrient concentrations in many plants.

Food insecurity leads to malnutrition, particularly affecting children's growth and cognitive development. Climate-related disruptions to food systems can cause price volatility, making nutritious foods less accessible to vulnerable populations. Additionally, changing agricultural conditions are altering the geographic distribution of foodborne pathogens, potentially increasing the risk of food poisoning and related gastrointestinal illnesses.

Water Security and Quality

Climate change profoundly affects water resources through altered precipitation patterns, increased evaporation, and melting glaciers and snowpack. These changes threaten both water quantity and quality, with significant implications for human health. Drought conditions reduce water availability, forcing communities to rely on potentially contaminated sources. Conversely, extreme precipitation events can overwhelm water treatment systems and cause contamination of drinking water supplies.

Water scarcity affects hygiene practices, increasing the risk of infectious diseases. Poor water quality is associated with waterborne diseases including cholera, typhoid, and hepatitis A. Climate change also affects the quality of recreational waters, potentially increasing the risk of illness from swimming in contaminated lakes, rivers, and coastal areas.

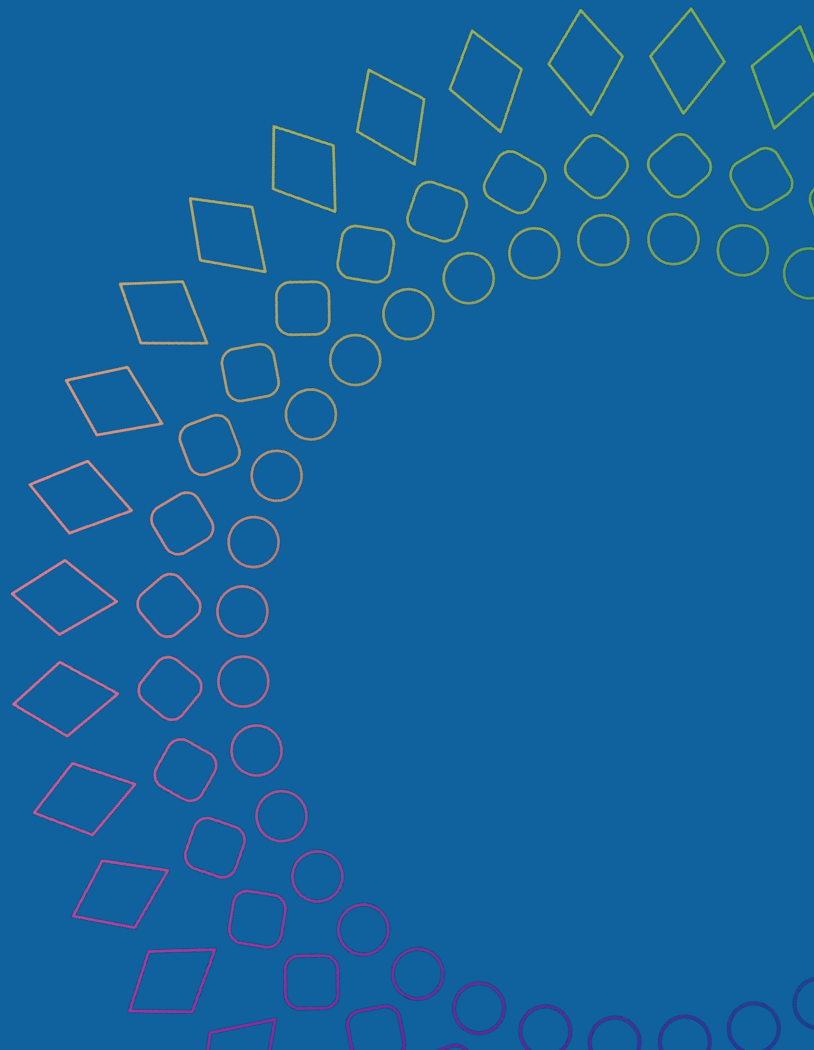
Vector-Borne and Infectious Diseases

Climate change is altering the geographic distribution, seasonal patterns, and transmission intensity of vector-borne diseases. Warmer temperatures and changing precipitation patterns are expanding the habitat range of disease-carrying vectors including mosquitoes, ticks, and sandflies. This expansion is bringing vector-borne diseases to new regions and extending transmission seasons in areas where these diseases are already endemic.

In Europe, tick-borne diseases such as Lyme disease and tick-borne encephalitis are expanding northward and to higher altitudes. The Asian tiger mosquito, capable of transmitting dengue, chikungunya, and Zika viruses, has established populations in several European countries. Climate change is also affecting the transmission of established vector-borne diseases, with longer mosquito seasons potentially increasing malaria transmission in endemic areas.

2

Vulnerable Populations



Vulnerable Populations



Children and Adolescents

Children are disproportionately vulnerable to climate-related health impacts due to their physiological characteristics, developmental stage, and dependency on others for protection. Children have less developed thermoregulatory systems, making them more susceptible to heat-related illness. Their smaller body size means they absorb proportionally more environmental toxins, and their developing organ systems are more sensitive to environmental stressors.

Climate change affects children's health through multiple pathways including increased risk of respiratory diseases from poor air quality, malnutrition from food insecurity, and infectious diseases from contaminated water. Mental health impacts include anxiety about climate change itself, trauma from extreme weather events, and stress from family displacement or economic hardship.

Educational disruption from climate events can have long-term consequences for children's development and future opportunities. Schools may be damaged by extreme weather, or children may be unable to attend due to illness, displacement, or need to help families cope with climate impacts.

Elderly Populations

Older adults face elevated risks from climate change due to age-related physiological changes, higher prevalence of chronic conditions, and potential social isolation. Aging affects thermoregulation, making elderly individuals more susceptible to both heat and cold stress. Many older adults take medications that can impair temperature regulation or increase sensitivity to heat.

Chronic conditions common in elderly populations, including cardiovascular disease, diabetes, and respiratory conditions, are exacerbated by climate-related stressors. Social isolation can prevent elderly individuals from accessing help during extreme weather events or from receiving information about health risks and protective measures.

Marginalized and Disadvantaged Communities

Climate change exacerbates existing health inequalities, with marginalized communities often bearing the greatest burden of climate-related health impacts. Low-income populations may live in areas with greater exposure to environmental hazards, have limited access to healthcare, and lack resources to adapt to climate risks.

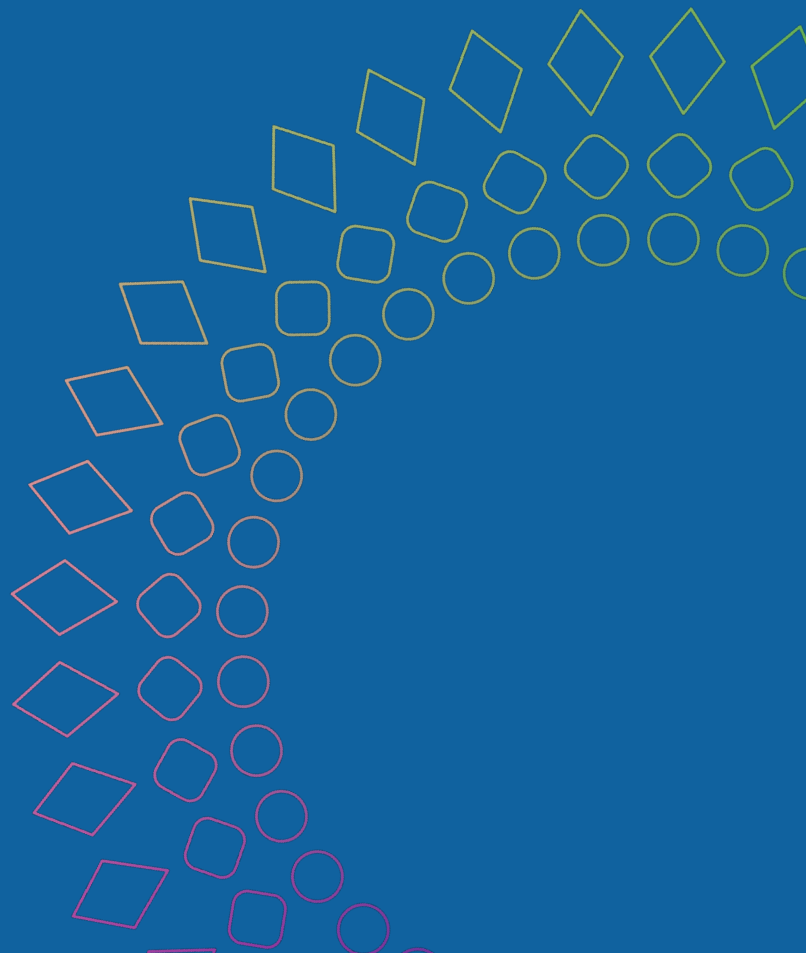
Racial and ethnic minorities, indigenous populations, and undocumented immigrants often face compounded vulnerabilities including discrimination in healthcare access, language barriers, and

distrust of public health authorities. These communities may also have higher baseline rates of chronic diseases that are exacerbated by climate change.

Geographic location contributes to vulnerability, with rural and remote communities potentially having limited healthcare infrastructure and emergency response capabilities. Urban populations in low-income neighborhoods may face higher exposure to heat, air pollution, and flooding while having fewer resources for adaptation.

3

Healthcare System Preparedness



Healthcare System Preparedness



Infrastructure Resilience

Healthcare systems must adapt their infrastructure to withstand climate-related stresses while maintaining service delivery. Extreme weather events can damage healthcare facilities, disrupt power and communication systems, and limit staff access to work sites. Flooding can contaminate medical equipment and supplies, while heat waves can overwhelm cooling systems and affect medication storage.

Building resilient healthcare infrastructure requires assessment of climate risks specific to each facility's location and function. Hospitals and clinics in flood-prone areas need elevated or flood-proofed critical systems. Facilities in fire-prone regions require defensible space and evacuation planning. All healthcare facilities need backup power systems, redundant communication networks, and climate-controlled storage for temperature-sensitive medications and vaccines.

Emergency preparedness planning must incorporate climate projections and consider cascading effects of climate events. Healthcare systems need surge capacity plans for heat-related illnesses, respiratory conditions from wildfire smoke, and injuries from extreme weather. Coordination with emergency management agencies, public health departments, and community organizations is essential for effective response.

Healthcare Workforce Preparedness

Healthcare professionals need training and education about climate-related health risks to effectively prevent, diagnose, and treat climate-sensitive conditions. This includes understanding the health effects of heat exposure, air pollution, and climate-related infectious diseases. Healthcare workers also need skills in communicating climate health risks to patients and communities.

Continuing education programs should incorporate climate health content across medical specialties. Emergency medicine professionals need training in mass casualty response for climate disasters. Primary care providers need knowledge about heat-related illness prevention and recognition of climate-sensitive diseases. Mental health professionals need training in climate anxiety and disaster trauma.

Professional medical organizations, including the European Society of Medicine, have a crucial role in developing educational resources, clinical practice guidelines, and advocacy training for healthcare professionals. Medical schools and residency programs should integrate climate health into their curricula to prepare the next generation of healthcare providers.

Healthcare System Mitigation

The healthcare sector itself contributes significantly to greenhouse gas emissions through energy consumption, transportation, waste generation, and pharmaceutical production. Healthcare systems have a responsibility to reduce their environmental footprint while maintaining high-quality patient care. This dual mandate requires innovative approaches to sustainable healthcare delivery.

Energy efficiency measures in healthcare facilities can significantly reduce emissions while often providing cost savings. These include LED lighting, efficient heating and cooling systems, building insulation, and renewable energy installations. Telemedicine and digital health technologies can reduce transportation-related emissions while improving access to care for some patients. Sustainable procurement practices can reduce the environmental impact of medical supplies and equipment. This includes selecting products with lower carbon footprints, reducing single-use items where safe alternatives exist, and implementing comprehensive recycling programs. [Organizations like Médecins du Monde](#) have developed frameworks for integrating environmental considerations into healthcare operations.

Pharmaceutical prescribing practices can also contribute to emissions reduction. Some medications, particularly metered-dose inhalers, have high carbon footprints due to propellant gases. Where clinically appropriate, healthcare providers can consider lower-emission alternatives while ensuring patient care is not compromised.

Public Health Adaptation

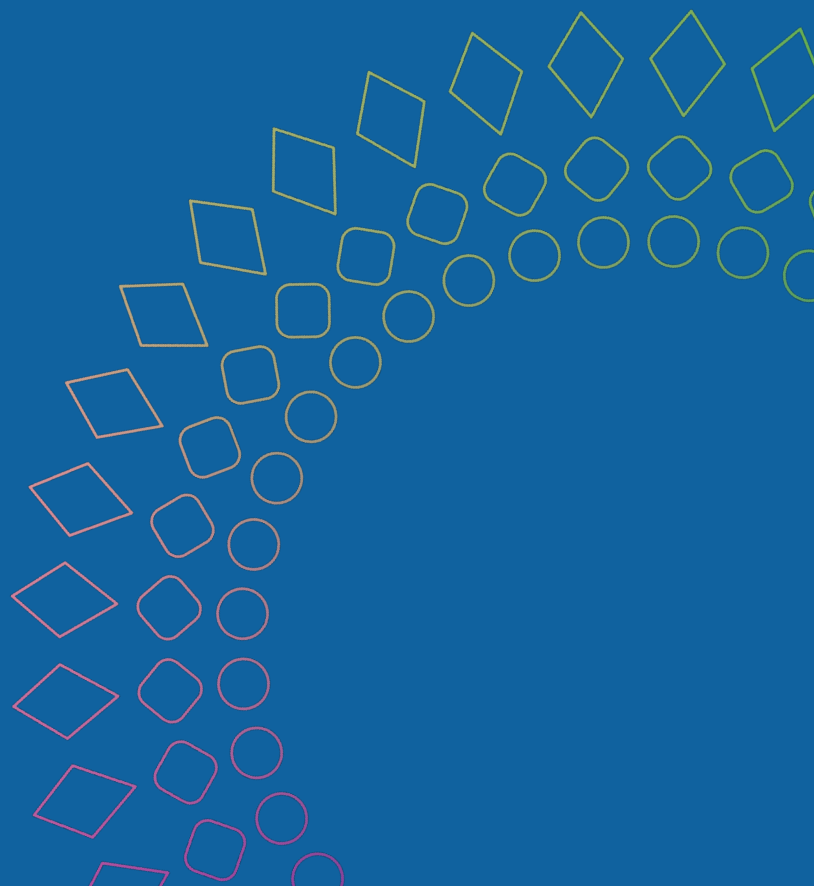
Public health systems need robust adaptation strategies to protect populations from current and projected climate health risks. Early warning systems for extreme weather events can provide timely alerts to help individuals and communities take protective actions. These systems should be tailored to local climate risks and reach vulnerable populations through multiple communication channels.

Surveillance systems for climate-sensitive health outcomes enable early detection of emerging health threats and evaluation of intervention effectiveness. This includes monitoring heat-related morbidity and mortality, vector-borne disease incidence, air quality-related health impacts, and food and waterborne disease outbreaks. Surveillance data should inform adaptive management strategies and resource allocation decisions.

Community-based interventions can enhance population resilience to climate health risks. Cooling centers provide refuge during heat waves, particularly for vulnerable populations without air conditioning. Community gardens and urban forestry initiatives can improve local food security and reduce urban heat island effects. Education campaigns can raise awareness about climate health risks and protective behaviors.

4

Role of Healthcare Professionals



Role of Healthcare Professionals



Clinical Practice Integration

Healthcare professionals have a unique opportunity to address climate change through their clinical practice while advocating for broader systemic changes. Patient care can incorporate climate considerations through screening for climate-related health risks, providing counseling about protective behaviors, and considering environmental factors in treatment decisions.

Climate health risk assessment should become a routine part of patient care, particularly for vulnerable populations. This includes assessing heat exposure risks, air quality sensitivity, and potential climate-related mental health impacts. Healthcare providers can counsel patients about protective measures such as staying hydrated during heat waves, limiting outdoor activities during poor air quality days, and developing emergency preparedness plans.

Prescription practices can consider climate implications where appropriate. For example, healthcare providers can discuss the environmental benefits of plant-based diets with patients who might benefit nutritionally from dietary changes. However, patient health must always remain the primary consideration in clinical decision-making.

Education and Advocacy

Healthcare professionals have a trusted voice in their communities and an ethical obligation to advocate for policies that protect public health. [As noted in recent BMJ editorials](#), healthcare professionals representing millions of patients have significant potential influence on climate policy when they speak with unified voices.

Professional advocacy can occur at multiple levels, from local hospital sustainability committees to national policy advocacy. Healthcare organizations can advocate for policies that reduce greenhouse gas emissions, improve air quality, enhance emergency preparedness, and protect vulnerable populations. Medical professionals can provide expert testimony on the health impacts of proposed policies and projects.

Education of colleagues, patients, and the public is another crucial role for healthcare professionals. This includes sharing evidence-based information about climate health risks, promoting protective behaviors, and supporting community resilience initiatives. Healthcare professionals can model sustainable behaviors in their personal and professional lives.

Research and Knowledge Generation

Healthcare professionals and medical researchers have essential roles in generating evidence about climate health impacts and evaluating intervention effectiveness. Clinical research can identify populations at highest risk, develop new treatment approaches for climate-related conditions, and evaluate the health co-benefits of climate mitigation strategies.

Health impact assessments of climate policies can inform decision-making by quantifying potential health benefits and risks. For example, research on the health co-benefits of active transportation, renewable energy, and sustainable food systems can strengthen the case for climate action while identifying opportunities to maximize health benefits.

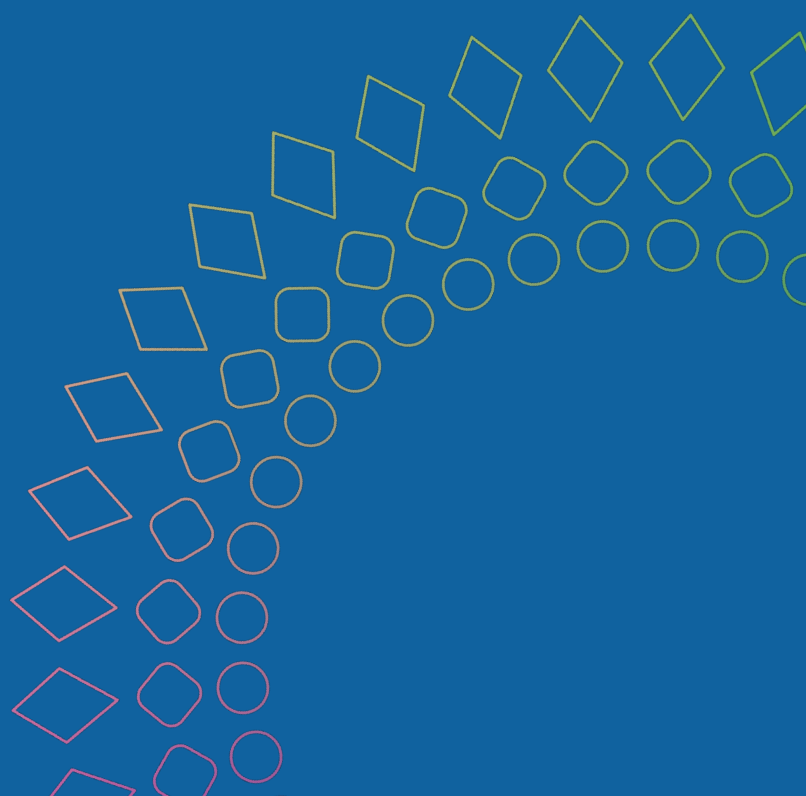
Collaboration between healthcare researchers and climate scientists can improve understanding of climate health relationships and enhance projection capabilities. This interdisciplinary research is essential for developing effective adaptation and mitigation strategies.

5

Conclusion

Call to action

References



Conclusion and Call to Action



Climate change represents an unprecedented threat to human health that requires immediate and sustained action from healthcare systems, policymakers, and society as a whole. The evidence presented in this position paper demonstrates that climate change is already affecting health across Europe through multiple pathways, with impacts projected to intensify without aggressive mitigation and adaptation efforts.

The European Society of Medicine calls for urgent action on multiple fronts:

Healthcare System Transformation: Healthcare systems must rapidly adapt to address current climate health risks while reducing their own environmental footprint. This requires investment in resilient infrastructure, workforce training, sustainable practices, and innovative care delivery models.

Policy Integration: Health considerations must be integrated into all climate and environmental policies, while health policies must account for climate change impacts. Cross-sectoral collaboration is essential for addressing the complex interactions between climate, environment, and health.

Research and Innovation: Continued investment in climate health research is needed to understand emerging risks, develop effective interventions, and evaluate policy impacts. European leadership in innovation can contribute to global climate health solutions.

Professional Engagement: Healthcare professionals must embrace their roles as advocates for planetary health while maintaining excellence in patient care. This includes clinical practice integration, professional advocacy, and public education.

Equity and Justice: Climate health interventions must prioritize protection of vulnerable populations and reduction of health inequalities. Justice considerations should guide resource allocation and policy development.

The window for limiting global warming to levels that avoid catastrophic health impacts is rapidly closing. However, many climate health interventions provide immediate benefits while contributing to long-term resilience. By acting decisively now, European healthcare systems can protect current patients while building capacity to address future challenges.

The European Society of Medicine commits to supporting healthcare professionals and organizations in addressing climate health challenges through education, advocacy, research, and policy development. We call upon our members, healthcare institutions, policymakers, and society to join us in this critical mission to protect health in our changing climate.

The health of current and future generations depends on the actions we take today. The time for debate has passed; the time for action is now.

This position paper was developed by the European Society of Medicine through a comprehensive review of scientific evidence and consultation with climate health experts across Europe. The Society acknowledges the contributions of healthcare professionals, researchers, and advocates who are working to address climate change as a health issue.

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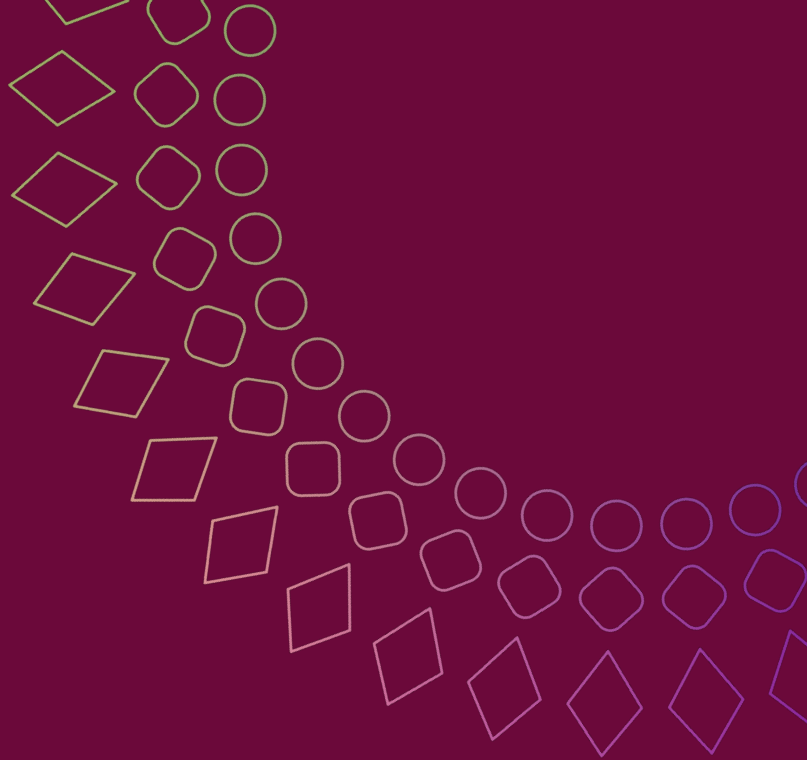
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References

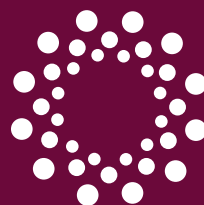


1. Watts N, Amann M, Arnell N, et al. The 2020 report of The Lancet Countdown on health and climate change: responding to converging crises. *Lancet*. 2021;397(10269):129-170. doi:10.1016/S0140-6736(20)32290-X
2. IPCC. Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press; 2023.
3. Weimann E, Weimann LE. Ways to Mitigate Climate Change by Implementing Zero Emission Hospitals – A Case Report. *Med Res Arch*. 2022;10(10). Available at: <https://esmed.org/MRA/mra/article/view/3464>
4. Pelosi L, Blumhardt HP. Climate Change and Health: Health Academics Could Do More to Build Upon the Success of Virtual Conferences During the Covid-19 Pandemic. *Med Res Arch*. 2023;11(7.1). Available at: <https://esmed.org/MRA/mra/article/view/5538>
5. European Environment Agency. Climate change, impacts and vulnerability in Europe 2016: An indicator-based report. EEA Report No 1/2017. Copenhagen: EEA; 2017.
6. Rocque RJ, Beaudoin C, Ndjaboue R, et al. Health effects of climate change: an overview of systematic reviews. *BMJ Open*. 2021;11(6):e046333. doi:10.1136/bmjopen-2020-046333
7. WHO. Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s. Geneva: World Health Organization; 2014.
8. Campbell-Lendrum D, Manga L, Bagayoko M, Sommerfeld J. Climate change and vector-borne diseases: what are the implications for public health research and policy? *Philos Trans R Soc Lond B Biol Sci*. 2015;370(1665):20130552. doi:10.1098/rstb.2013.0552
9. Berry HL, Waite L, Dear K, O'Brien LV, Carins J, Murray V. The case for systems thinking about climate change and mental health. *Nat Climate Change*. 2018;8:282-290. doi:10.1038/s41558-018-0102-4
10. European Centre for Disease Prevention and Control. Climate change and communicable diseases in the EU Member States: Handbook for national vulnerability, impact and adaptation assessments. Stockholm: ECDC; 2018.
11. Patz JA, Frumkin H, Holloway T, Vimont DJ, Haines A. Climate change: challenges and opportunities for global health. *JAMA*. 2014;312(15):1565-1580. doi:10.1001/jama.2014.13186

12. McMichael AJ, Woodruff RE, Hales S. Climate change and human health: present and future risks. *Lancet*. 2006;367(9513):859-869. doi:10.1016/S0140-6736(06)68079-3
13. Salas RN, Maibach E, Pencheon D, Watts N, Frumkin H. A pathway to net zero emissions for healthcare. *BMJ*. 2020;371:m3785. doi:10.1136/bmj.m3785
14. Karliner J, Slotterback S, Boyd R, Ashby B, Steele K. Health care's climate footprint: How the health sector contributes to the global climate crisis and opportunities for action. *Health Care Without Harm*; 2019.
15. Romanello M, McGushin A, Di Napoli C, et al. The 2021 report of the Lancet Countdown on health and climate change: code red for a healthy future. *Lancet*. 2021;398(10311):1619-1662. doi:10.1016/S0140-6736(21)01787-6
16. Gasparrini A, Guo Y, Sera F, et al. Projections of temperature-related excess mortality under climate change scenarios. *Lancet Planet Health*. 2017;1(9):e360-e367. doi:10.1016/S2542-5196(17)30156-0
17. Panos PT, Panos A. Recovery and Resilience from Climate-Related Health Disasters in Mozambique. *Med Res Arch*. 2025;13(1). Available at: <https://esmed.org/MRA/mra/article/view/6633>



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