

NIH Climate Change and Health Initiative: Strategic Vision and Opportunities for the Future

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Background/Objectives. There is international consensus that climate change poses many threats to human health and wellbeing. Climate drivers affect human health outcomes directly through weather events such as extreme heat, wildfires, droughts, storm surges, and floods, and indirectly through a series of exposure pathways such as air and water quality, food quality, infectious diseases, and massive population displacement events. The World Health Organization predicts that between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year, from malnutrition, malaria, diarrhea, and heat stress.

The U.S. National Institutes of Health (NIH) has supported climate change and health-relevant research over more than 10 years. Through the years 2010 to 2020, annual NIH support for climate change and health research hovered around \$10 million funded by 21 NIH components. The NIH Climate Change and Health Initiative, launched in 2021, is an NIH-wide effort to develop the first coordinated NIH plan for research and training on the impacts of climate change on human health. During this presentation the U.S. National Institutes of Health will share the strategic vision of the initiative as well as initiatives developed to address climate change and human health issues.

Approach/Activities. The NIH Climate Change and Health Initiative is an NIH-wide effort to develop a research initiative to develop new scientific knowledge and evidence on the impacts of climate change on human health to inform solution driving approaches to build resiliency and protect health in vulnerable populations around the world. The framework was informed by a month's long planning and engagement process and reflects extensive input and coordination from community organizations, academic scientists, and stakeholders across the NIH Institutes and Centers. The framework will guide activities and a community of practice comprising outstanding and committed scientists, trainees, and specialists. Since the publication in 2021 (<https://www.nih.gov/climateandhealth>), the Initiative has also established a monthly climate change and health seminar series, conducted a landscape analysis of organizations working in the climate and health field, developed funding opportunities for the scientific community, and kicked-off training and capacity building activities such as the Climate and Health Scholars Program.

Results/Lessons Learned. NIH Framework for Climate Change and Health includes four major areas of interest: Health Effects Research, Health Equity, Intervention Research and Training and Capacity Building. In addition, the framework identifies nine key areas of supporting science for climate change and health research. The Initiative aims to support impactful research across these domains and build a community of practice comprising outstanding and committed scientists, trainees, and specialists in health, climate sciences and additional disciplines to address the complexity of the climate change problem in a trans--disciplinary, coordinated manner.

As the world calls for climate action to protect the health and well-being of people around the world, research remains critical in understanding impacts, adaptation, and mitigation measures to improve human health. Funding, therefore, must also encourage this critical transdisciplinary research and move beyond traditional stovepipes to create new knowledge that provides evidence for solutions and strategies that protect health, especially of the most vulnerable populations around the world, as we adapt and predict current and future climate challenges. Funding organizations, public and private have in the past year announced numerous initiatives to address these research needs and expand the field of environmental and climate science to address this complex issue. Beyond expanding research, NIH funding efforts include plans to build capacity, workforce, diversity, and equity in research around the world.