

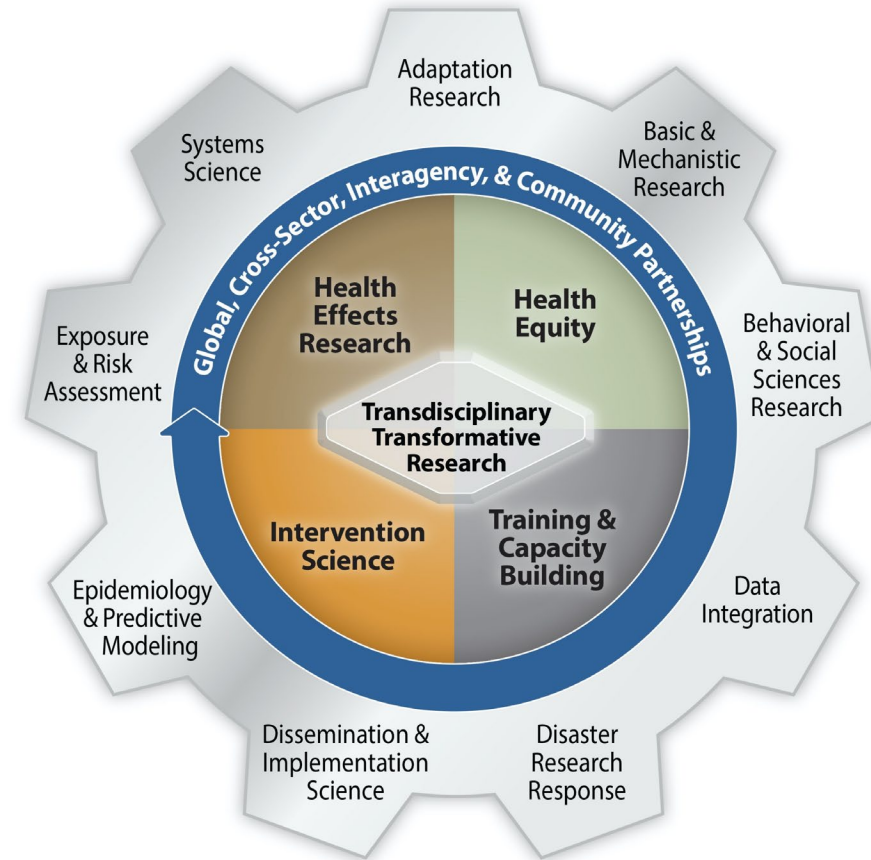
NIA Priorities and Resources for Studying the Impact of Climate on Older Adult Health

Emerald Nguyen, Program Official

RCCN Workshop: Climate Change and Aging

November 12, 2024

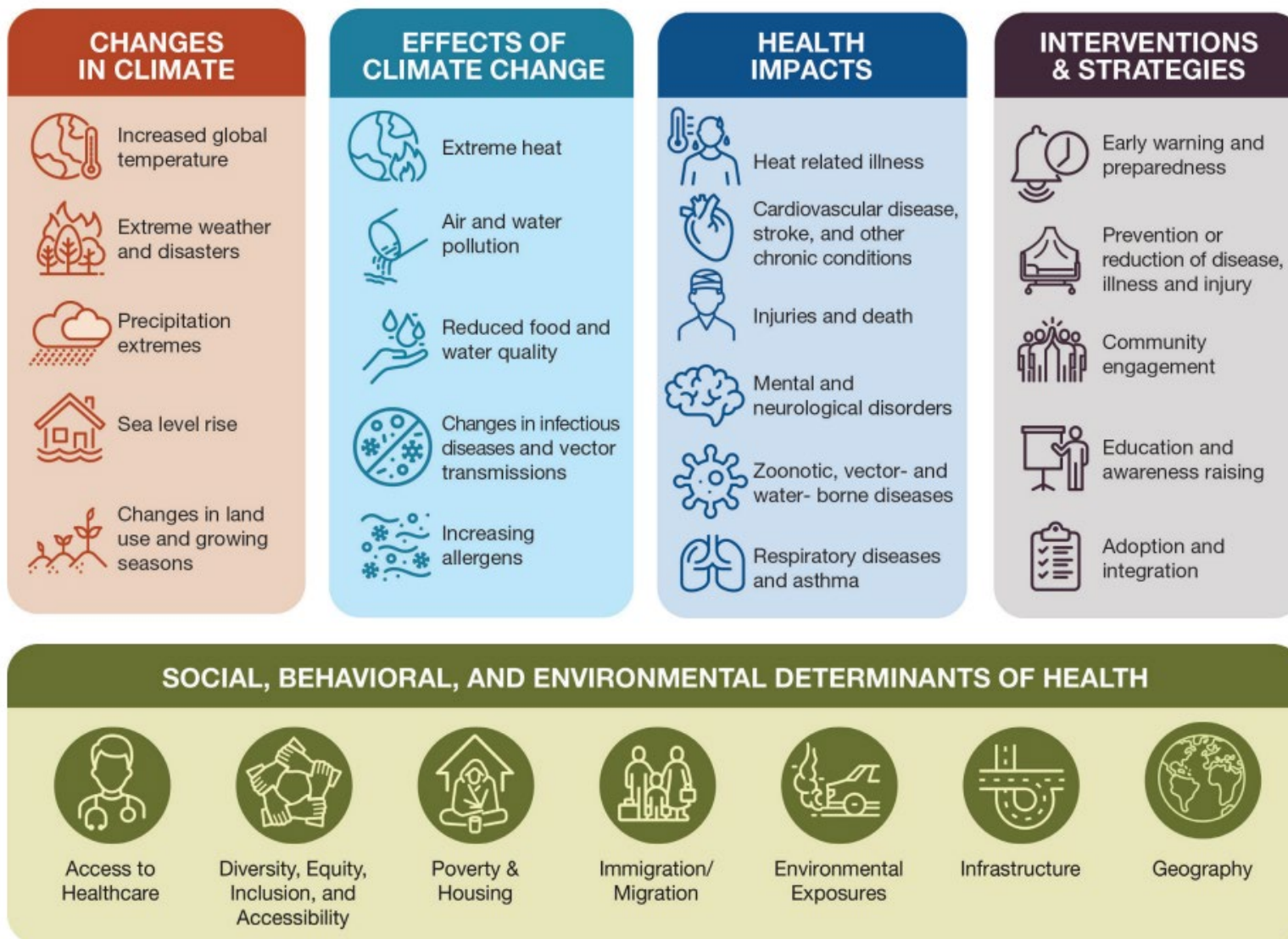
NIH Climate and Human Health Initiative



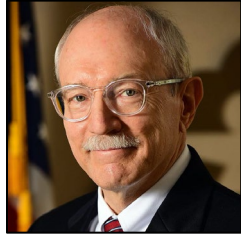
Strategic Framework launched in 2022

Climate Events and the Resulting Effects that Influence Health

<https://www.nih.gov/climateandhealth>



Executive Committee of the NIH Climate Change and Health Initiative



Rick Woychik, PhD
Director, NIEHS
Executive Committee Chair



Diana Bianchi, MD
Director, NICHD



Lindsey Criswell, MD
Director, NIAMS*



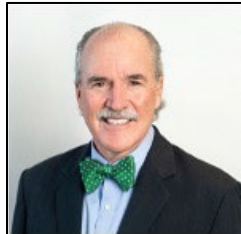
Gary Gibbons, MD
Director, NHLBI



Joshua Gordon, MD, PhD
Director, NIMH



Richard Hodes, MD
Director, NIA*



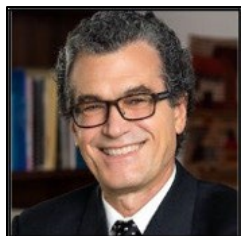
Peter Kilmarx, MD
Acting Director, FIC



Shannon Zenk, PhD
Director, NINR



Jeanne Mrazzozzo, MD
Director, NIAID*



Eliseo Perez-Stable, MD
Director, NIMHD



Helene Langevin, MD
Director, NCCIH*

*Expansion from 7 to 11 NIH Institutes and Centers in 2023

Understanding the Impacts of Climate on Aging is an NIA Priority

NIA [Strategic Directions](#):

- Goal B (personal, interpersonal, societal factors)
- Goal F (health disparities)

NIA [AD/ADRD Milestone 1.R](#) (air pollution and climate change)

[National Advisory Council Review of BSR](#): impact of climate change as a macrosocial trend of aging

Additional NIA Activities:

2022 NASEM seminar on [Consequences of Climate Change for Health at Older Ages](#)

2024 workshop on [Impacts of Extreme Weather Conditions and Disasters on Older Adult Health](#)

NIA/NIH representation on the [National Advisory Committee on Seniors and Disasters \(NACSD\)](#)

NIA's Research Interests: Processes and Interactions

The impacts of climate change and extreme weather on health and/or well-being, pace of aging, and aging-related biological mechanisms and physiological processes (e.g., immune function, circadian rhythm, etc.) across the life span.

Interactions or additive effects on rates of aging due to environmental exposures or changing environmental hazards (e.g., particulates endocrine disruptors, residuals from manufacturing or other toxins, or extreme weather) on molecular, cellular, and physiological perturbations that impact health and/or well-being across the lifespan.

Interactions or additive effects of environmental exposures or changing environmental hazards (e.g., heightened amounts of air pollutants, extreme heat or cold) on affective, social, and cognitive functions over the life course, as well as effects on brain health across the lifespan.

NIA's Research Interests: Health Behaviors and Functioning

Midlife and older adult health promotion, adaptation, and resilience in the face of climate change and in the aftermath of extreme weather events.

Functional abilities in midlife and older adult populations (e.g., day-to-day activities, physical limitations, sensory deficits, etc.) in the context of climate change or extreme weather conditions.

The impact of age-related change in affective, social, and cognitive factors on individual responses to climate change, and on how individuals initiate and maintain the behavior changes needed for preparedness and adaptation to extreme weather events.

NIA's Research Interests: Health Inequities

Effects of extreme weather events or changing environmental hazards on older adults from diverse racial, ethnic, sexual and gender minority, physical disability, and socially disadvantaged backgrounds effectively managing health conditions (e.g., diabetes, cholesterol, weight management, various types of arthritis, etc.) and any untold financial burden that may be exacerbated by changes in the environment.

The contribution of extreme weather events and related natural disasters, to social structure and social adversity, and their effects on aging processes across the life course, in studies of animals in their natural habitats.

Cross-national analyses of nationally representative data, particularly analyses that include low- and middle-income countries, including data from the [US Health and Retirement Study \(HRS\)](#), [International Family of HRS studies](#), and the [Harmonized Cognitive Assessment Protocol \(HCAP\)](#) available in the HRS and several international studies to measure cognitive outcomes.

NIA's Research Interests: Systems and Policies

Health services delivery and healthcare infrastructure preparedness in the context of climate change and extreme weather events.

Health care policies that may promote or sustain adopting preventive measures taken to mitigate overall rates of mortality or morbidity among older adults from diverse racial, ethnic, sexual and gender minority, physical disability, and socially disadvantaged backgrounds that are associated with or caused by extreme weather events or changing environmental hazards.

Policy, economic, and systems analysis research towards system changes for preparedness or response to climate change and extreme weather events.

Studies on organizational policies and practices for reducing healthcare facilities and systems emission contribution to climate change.

Studies that develop, implement, and evaluate the effectiveness of communication or educational resources about health impacts of climate change for specific older adult populations or stakeholders, including individuals living with Alzheimer's disease and related dementias and individuals and institutions that provide care for these individuals.

Funding Opportunities

Notice of Special Interest (NOSI): Climate Change and Health

[NOT-ES-22-006](#). Expiration Date: May 08, 2025

Long-Term Effects of Disasters on Healthcare Systems in Populations with Health Disparities (R01 - Clinical Trial Optional)

[PAR-24-109](#). Expiration Date: May 08, 2027

The Impact of Stressors on the Biological Mechanisms of Aging and Other Aging-Associated Outcomes in Experimental Model Systems (R61/R33 Clinical Trial Not allowed)

[RFA-AG-25-019](#). Expiration Date: November 7, 2024

Infrastructure for Climate and Aging Research

Climate and Aging Exploratory Research Centers

- Climate, Health, and Aging Innovation and Research Solutions for Communities (Brown Univ., PI: Allan Just)
- Climate and Health: Action and Research for Transformational Change (Columbia Univ., PI: Marianthi-Anna Kioumourtzoglou)

Center on Aging, Climate, and Health (Univ. Colorado, PI: Lori Hunter)

CAFÉ Research Coordinating Center to foster a community of practice.

Climate and Health Outcomes Research Data Systems (CHORDS) to link health, environmental, and climate data, in addition to offering other tools and resources.

NIA Climate and Health Scholars Program



Zhen Cong, Ph.D.
2022-2023 Scholar



Arnab Ghosh, M.D., M.Sc., M.A.
2023-2024 Scholar



Sue Anne Bell, Ph.D.
2024-2025 Scholar

NIA Climate Webinar Series

March 25, 2024 | [Translating Climate and Health Research Insights into Action: An NIA/NIH Speaker Series](#)

April 23, 2024 | [Opportunities for climate and health research through the use of implementation science approaches: frameworks, measures, examples](#)

May 13, 2024 | [Team Science in Climate and Health](#)

June 24, 2024 | [Environmental Justice, Climate Justice, and its Integration and Application into Interventions](#)

July 16, 2024 | [Creating enduring change: climate change, health, and policy: a systems level perspective for older aged populations](#)

August 13, 2024 | [Learning from Examples: Trials and Tribulations](#)

Exposome and Environmental Justice Initiatives

NIA's investments in exposome research infrastructure:

- [Gateway Exposome Coordinating Center](#) (GECC) domains include climate
- [Network of EXposomics in the United States](#) (NEXUS)

Environmental Health Disparities Centers Program

- Currently supports three centers
- Renewal in 2025 ([RFA-MD-24-010](#))

[Environmental Justice Scholars Program](#) to build NIH capacity to advance EJ-related activities and initiatives.

[Environmental Justice Training Program](#) to build community capacity and train researchers to work in partnership with communities.

Thank you