National Academy of Medicine: Climate and Health Day of the US Climate Action Summit

Thursday, April 25, 12:30-5:30pm ET
National Academy of Medicine Keck Center
CLIMATE AND HEALTH DAY OF THE US CLIMATE ACTION SUMMIT AGENDA

Thursday, April 25, 2024
Keck Center of the National Academies
500 Fifth Street NW, Washington DC 20001

The National Academy of Medicine is pleased to co-host Climate and Health Day with Kaiser Permanente and Climate Group as part of the US Climate Action Summit. The Climate and Health Day public program will feature four panels exploring different aspects of climate and health, to be followed by a social reception. The goals of the public program are to hear from global leaders on driving actionable change to address climate change; to delve into the impacts of climate change on health, including risks, impacts, and equitable solutions; highlight opportunities for cross-sectoral collaboration for mitigation and adaptation; and explore mechanisms for creating climate-resilient communities.

In addition to the above program, the day will also include the launch of the NAM’s new initiative on “Accelerating the National Climate and Health Movement.” This initiative is intended to build upon and sustain the groundswell of health sector organizations addressing climate and health across the nation.

Any questions? Please contact Chris Hanley, NAM Climate Grand Challenge Director, chanley@nas.edu.

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<th>Time (ET)</th>
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<td>12:00-12:30</td>
<td>Lunch for in-person attendees</td>
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| 12:30-12:40| **Introduction and Welcome**                 | Victor Dzau, National Academy of Medicine
                                                          Bechara Choucair, Kaiser Permanente
                                                          Angela Barranco, Climate Group |
| 12:40-12:50| **Opening Remarks**                          | Ali Zaidi, White House Climate Policy Office                            |
| 12:50-1:50 | Panel 1: **Special Panel of Global Health Leaders** | Moderator: Judith Rodin, Rockefeller Foundation and University of Pennsylvania (former) Panelists:
                                                          • Naveen Rao, Rockefeller Foundation
                                                          • John Balbus, OCCHE, HHS
                                                          • Pam Cheng, AstraZeneca
                                                          • Tamer Rabie, World Bank |
| 1:50-2:00  | **Addressing Climate and Health: A Global Perspective** | Vanessa Kerry, WHO Special Envoy for Climate Change and Health |
| 2:00-2:20  | **NAM Climate Grand Challenge**              | Victor Dzau, National Academy of Medicine                             |
|            | *Launch of the NAM “Accelerating the National Climate and Health Movement” initiative* |                                                                      |
| 2:20-3:20  | Panel 2: **Climate Change and Health: Understanding Risks, Impacts, and Equitable Solutions** | Moderator: Susan Anenberg, George Washington University
                                                          Panelists: |
This panel will delve into the multifaceted impacts of climate change on health while also exploring equitable solutions to address these challenges. Panelists will discuss not only the various health risks posed by climate change but also the disproportionate burden borne by marginalized and underserved communities. Panelists will be asked to highlight initiatives and interventions aimed at promoting health equity, such as equitable access to healthcare services, community-driven adaptation measures, and policies that address underlying social determinants of health.

- Ari Bernstein, Centers for Disease Control and Prevention
- Cheryl Holder, Florida Clinicians for Climate Action
- Joshua Weil, Kaiser Permanente
- Neil Vora, Conservation International
- Laura Kate Bender, American Lung Association

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<tr>
<th>Time</th>
<th>Event Description</th>
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<td>3:20-3:30</td>
<td>Break</td>
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<td>3:30-4:30</td>
<td>Panel 3: <strong>Synergistic Approaches in Climate, Health, and Equity Initiatives</strong></td>
<td>Moderator: George Barrett, Cardinal Health (former) Panelists:</td>
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|         | This panel will explore the importance of cross-sector collaboration, as well as the symbiotic strategies required, in addressing the complex challenges posed by climate change and its impact on health. Speakers are encouraged to share opportunities for collaboration and partnership-building, including joint research projects, resource sharing, and capacity-building initiatives. | • Liz Fowler, Center for Medicare and Medicaid Innovation (CMS Innovation Center)  
• Jonathan Perlin, The Joint Commission  
• Emmie Mediate, Health Care Without Harm  
• Seema Wadhwa, Kaiser Permanente  
• Renee Salas, The Cooperative |
| 4:30-5:20 | Panel 4: **Resilient Climate and Health Communities: Climate-Proofing Health Care at the Community Level** | Moderator: Maureen Lichtveld, University of Pittsburgh School of Public Health Panelists: |
|         | This panel will explore the importance of engaging at the community level to bring in those who are most pressed by the challenges posed by climate change and its impact on health. Speakers are encouraged to share opportunities for collaboration and partnership-building, including joint research projects, resource sharing, and capacity-building initiatives. | • Jessica Hinshaw, National Association of Community Health Centers  
• Sacoby Wilson, University of Maryland, College Park School of Public Health  
• Nathaniel Smith, Partnership for Southern Equity  
• Funmi Chinekezi, National Academy of Medicine |
| 5:20-5:25 | **Closing Remarks**                                                               | Angela Barranco, Climate Group  
Bechara Choucair, Kaiser Permanente  
Victor Dzau, National Academy of Medicine |
| 5:25-6:45 | Reception for in-person attendees                                                 |                                                                                                                                          |
SUSAN ANENBERG, Professor and Chair, Environmental and Occupational Health Department, George Washington University Milken Institute School of Public Health, Director, George Washington Climate and Health Institute

Susan Anenberg is a Professor and Chair of the Environmental and Occupational Health Department at the George Washington University Milken Institute School of Public Health. She is also the Director of the GW Climate and Health Institute. Dr. Anenberg's research focuses on the health implications of air pollution and climate change, from local to global scales. She currently serves on the U.S. Environmental Protection Agency's Science Advisory Board, the World Health Organization's Global Air Pollution and Health Technical Advisory Group, and the National Academy of Science's Committee to Advise the U.S. Global Change Research Program. She also serves as President of the GeoHealth section of the American Geophysical Union. Previously, Dr. Anenberg was a Co-Founder and Partner at Environmental Health Analytics, LLC, the Deputy Managing Director for Recommendations at the U.S. Chemical Safety Board, an environmental scientist at the U.S. Environmental Protection Agency, and a senior advisor for clean cookstove initiatives at the U.S. State Department.

JOHN BALBUS, Director, Office of Climate Change and Health Equity, Office of the Assistant Secretary for Health and the Deputy Assistant Secretary for Climate Change and Health Equity

Dr. Balbus is the Director of the new Office of Climate Change and Health Equity within the Office of the Assistant Secretary for Health and the Deputy Assistant Secretary for Climate Change and Health Equity. A physician and public health professional with over 25 years of experience working on the health implications of climate change, Dr. Balbus has served as HHS Principal to the U.S. Global Change Research Program and co-chair of the working group on Climate Change and Human Health for the U.S. Global Change Research Program since he joined the federal government in 2009. Before coming over to the new Office, Dr. Balbus served as Senior Advisor for Public Health to the Director of the National Institute of Environmental Health Sciences (NIEHS).

Prior to joining NIEHS, Dr. Balbus was the Chief Health Scientist at the Environmental Defense Fund and an Associate Professor of Environmental and Occupational Health at the George Washington School of Public Health and Health Services. He received his MPH degree from the Johns Hopkins School of Hygiene and Public Health, his MD degree from the University of Pennsylvania, and his undergraduate degree in Biochemistry from Harvard University. He was elected to the National Academy of Medicine in 2021.
Speakers

ANGELA BARRANCO, Executive Director, North America, Climate Group

Angela currently serves as the Executive Director for North America at Climate Group. She brings over two decades of political and policy management experience, including several years in problem-solving, campaign-driven, solutions-focused work on climate, clean energy, clean cars and protecting natural resources, most recently as Undersecretary of the California Natural Resources Agency. Prior to CNRA, Angela served as Chief Executive for River LA, Deputy Chief of Staff at the US Department of Housing and Urban Development (HUD) and led climate and environment outreach for the Obama White House as Associate Director for Public Engagement of the White House Council of Environmental Quality (CEQ).

Angela’s extensive climate, policy and strategic management skills help Climate Group to strengthen partnerships and networks across sectors to drive impact at this urgent moment. Her strong leadership experience helps focus Climate Group North America on accountability and comprehensive emissions reductions that create a more prosperous future for all. She holds a Bachelor of Arts from Columbia University in Environmental & Conservation Biology and is based out of Washington, D.C. with her husband and two children.

GEORGE BARRETT, founder of The Overtone Group and former chairman and CEO of Cardinal Health

George Barrett is a healthcare industry leader, educator, and frequent speaker on leadership, with a distinguished career as a business executive of global corporations. He is the founder of the Overtone Group, and served as chairman and CEO of Cardinal Health, a Fortune 20 multi-national healthcare services and products company, for nearly a decade, ending in November 2018. Under his tenure, Cardinal Health was recognized as one of Fortune’s World’s Most Admired Companies, Forbes America’s Best Employers, and received numerous awards for its public health, corporate social responsibility, and philanthropic initiatives.

Barrett is a director on corporate, public sector, and non-profit boards, including Target Corporation, National Resilience, Digital Diagnostics, Nationwide Children’s Hospital, and is vice chair of The Conference Board. He co-chairs a National Academy of Medicine Action Collaborative on Decarbonizing the U.S. Health Sector. He was a director of the Fourth District of the Federal Reserve Bank and served as a member of President Obama’s White House Business Council. A lifelong performing musician and singer-songwriter, he is a trustee of the Rock & Roll Hall of Fame.

Barrett is a visiting professor of practice and senior fellow at NYU’s Stern School of Business, an adjunct professor at Columbia University’s Mailman School of Public Health, and a frequent lecturer at other universities. He is a graduate of Brown University with a dual concentration in history and music and earned an M.B.A. from NYU. He holds multiple honorary doctorates and is the recipient of the Ellis Island Medal of Honor, among other honors for a life dedicated to statesmanship and community service.
Laura Kate Bender, Assistant Vice President, Nationwide Healthy Air, American Lung Association

Laura Kate Bender is the Assistant Vice President, Nationwide Healthy Air at American Lung Association. Laura Kate has spent more than a decade working for protections from air pollution and climate change. She currently serves as Assistant Vice President, Nationwide Healthy Air at the American Lung Association, where she leads the Healthy Air Campaign, directing advocacy initiatives in Washington, DC; field work in multiple states; and coordination of a broad group of national public health and medical organizations. She previously served as the campaign’s lead representative to Congress, advocating for limits on outdoor air pollution to protect public health. Prior to that, she worked in Virginia to implement the Healthy Air Campaign on the state level. She also served on the board of the Virginia Asthma Coalition. Prior to joining the Lung Association, Laura Kate worked as an organizer on clean air issues for Environment America. Laura Kate studied political science and communications at American University in Washington, DC. She lives in Fairfax, Virginia with her husband and two children.

Aaron “Ari” Bernstein, National Center for Environmental Health/Agency for Toxic Substances and Disease Registry

Aaron Bernstein, MD, MPH, serves as Director for the National Center for Environmental Health and the Agency for Toxic Substances and Disease Registry (NCEH/ATSDR). Prior to joining NCEH/ATSDR, Dr. Bernstein led the Center for Climate, Health, and the Global Environment at Harvard T.H. Chan School of Public Health (Harvard Chan C-CHANGE) and practiced pediatrics at Boston Children’s Hospital for nearly 20 years.

Dr. Bernstein is an internationally known leader in children’s environmental health, having spent his career working to ensure that all children can grow up in environments that enable them to live up to their full potential. His scholarship has explored a broad range of subjects, from toxic exposures to mercury and air pollution, to global environmental changes such as climate change and the loss of biodiversity, and their effects on health and health equity.

Dr. Bernstein has held many leadership and advisory positions. He has served on the steering committee for the National Academy of Medicine’s action collaborative on decarbonizing the U.S. healthcare sector, chaired the American Academy of Pediatrics Council on Environmental Health, was an advisor to the Dalio Center for Health Justice at NYP, and was a member of the Board of Scientific Counselors to the CDC’s NCEH/ATSDR.

After receiving his bachelor’s degree in Human Biology from Stanford University, he received graduate degrees in medicine (MD) and public health (MPH) from the University of Chicago and Harvard University, respectively. He is a recipient of the Stanford University’s Firestone Medal for Research and a Harvard University Zuckerman Fellowship.
NAM Climate and Health Day
Speakers

PAM CHENG, Executive Vice President, Global Operations, IT & Chief Sustainability Officer, AstraZeneca

Pam was appointed Executive Vice-President, Operations & Information Technology in June 2015 and assumed additional responsibility for the AstraZeneca Sustainability strategy and function in January 2023. Pam joined AstraZeneca after having spent 18 years with Merck/MSD in Global Manufacturing and Supply Chain and Commercial roles. Pam was the Head of Global Supply Chain Management & Logistics for Merck and led the transformation of Merck supply chains across the global supply network. Pam also held the role of President of MSD China, responsible for MSD’s entire business in China. Prior to joining Merck, Pam held various engineering and project management positions at Universal Oil Products, Union Carbide Corporation and GAF Chemicals. Pam holds Bachelor’s and Master’s degrees in chemical engineering from Stevens Institute of Technology in New Jersey and an MBA in marketing from Pace University in New York. In addition to her role at AstraZeneca, Pam serves as a Non-Executive Director of the Smiths Group plc Board and as a Trustee Member of the Board for Stevens Institute of Technology. Pam also serves as an Advisor to the International Society of Pharmaceutical Engineering (ISPE) Board of Directors.

BECHARA CHOUCAIR, Executive Vice President and Chief Health Officer, Kaiser Permanente

Dr. Bechara Choucair, a board-certified family physician, serves as chief health officer for Kaiser Permanente, one of America’s leading integrated health systems with more than 12.5 million members. He oversees for the organization’s Medicaid line of business covering 1.5 million members, and advances initiatives to increase access to care and improve health outcomes for those enrolled in both Medicaid and Medicare.

Dr. Choucair also leads the organization’s community health and social health portfolios. This includes creating the nation’s largest social health network to meet the housing, food and transportation needs of Kaiser Permanente’s members and managing $3.4 billion to support medical financial assistance and charitable health coverage programs, as well as grants to community health programs throughout the organization’s footprint. In addition, he is accountable for Kaiser Permanente’s environmental stewardship work, which resulted in the organization becoming carbon neutral in 2020, and he oversees the organization’s goal to reach net-zero emissions by 2050.

From January through November 2021, Dr. Choucair served as the White House national COVID-19 vaccinations coordinator. During his tenure, nearly 500 million doses of the vaccine were administered nationwide. He returned to Kaiser Permanente in December 2021. Dr. Choucair served as Chicago’s Public Health Commissioner from 2009 to 2014.
OLUFUNMILAYO CHINEKEZI, Program Officer, Climate Communities Network, National Academy of Medicine

Olufunmilayo ‘Funmi’ Chinekezi is a dynamic public health professional and Certified Health Education Specialist (CHES) with 10 years of experience in program management, community engagement, qualitative research, and more. Most of the work Funmi has done in recent years has centered around capacity building to advance health equity and social justice. Her notable strengths include technical writing, program evaluation, and team building. She also cares deeply about and possesses expertise on topics related to racial/ethnic minority health, particularly the built environment and housing, climate change, maternal health, and health literacy. Funmi graduated with her Bachelor of Arts degree in Health Administration and Policy from the University of Maryland, Baltimore County (UMBC). She received her Masters degree in Public Health from the University of Maryland, College Park School of Public Health. Currently, Funmi serves as a Program Officer with the National Academy of Medicine, where she leads the inaugural Climate Communities Network, a program dedicated to addressing climate related health inequities in and with local communities.

Prior to coming to the NAM, Funmi worked at AAMC, providing leadership and subject matter expertise on special initiatives within the recently founded AAMC Center for Health Justice, including their trustworthiness and maternal health equity portfolios. In addition to managing the AAMC CHARGE collaborative, she conducted and contributed to various research/policy publications and projects. Funmi also previously worked for the HHS Office of Minority Health Resource Center, spearheading programmatic, evaluation, and capacity building initiatives for the African American population portfolio. In this role, Funmi supported the development and delivery of technical assistance and health education for a number of topics such as sickle cell disease, hepatitis/HIV, reproductive health, and cultural competency. Funmi began her career at the American Public Health Association (APHA) as an Assistant Editor for the American Journal of Public Health, leading many efforts to rebrand the journal, and with the APHA’s Center for School, Health and Education on projects related to youth/adolescent health, ACEs, chronic stress, and trauma-informed care. Funmi also has experience in chronic disease prevention and management, having previously served as a lead project manager for community-based interventions at the American Diabetes Association.

VICTOR J. DZAU, President, National Academy of Medicine

Victor Dzau is President of the National Academy of Medicine, Vice-Chair of the National Research Council, Chancellor Emeritus of Duke University, and past CEO of Duke Health System. Previously, he was Professor and Chairman of Medicine at both Harvard and Stanford Universities. Dr. Dzau is recognized globally for a long and highly decorated career as a scientist, administrator, and leader. His research laid the foundation for development of lifesaving drugs known as ACE inhibitors, used globally to treat high blood pressure and congestive heart failure.
During Dzau’s tenure, the NAM has launched important initiatives including the Global Health Risk Framework, the Human Genome Editing Initiative, the Action Collaborative on Clinician Well-Being and Resilience, and the Healthy Longevity Grand Challenge. In 2020, the NAM launched the Grand Challenge on Climate Change, Human Health, and Equity, a multi-year global initiative to improve and protect human health, well-being, and equity by working to transform systems that both contribute to and are impacted by climate change. In 2021, Dzau inaugurated the NAM Action Collaborative on Decarbonizing the Health Sector, bringing together leaders to develop and implement strategies to reduce the health sector’s carbon footprint and strengthen resilience.

A leader in global health, Dzau launched the Duke Global Health Institute and Duke-NUS Medical School in Singapore, founded the Division of Global Health Equity at Harvard, and chairs the International Advisory Board of McGill’s School of Population and Global Health. Among other activities, he serves on WHO and World Bank’s Global Preparedness Monitoring Board, is co-chair of G20 Scientific Panel on Global Health Security, and was on the board of the Coalition of Epidemic Preparedness and Innovation. He leads the World Economic Forum Regional Vaccine Manufacturing Collaborative and is co-chair of the Science and Technology Expert Panel for the Independent Pandemic Preparedness Secretariat.

ELIZABETH FOWLER, Deputy Administrator and Director, Center for Medicare and Medicaid Innovation at Centers for Medicare and Medicaid Services

Dr. Elizabeth Fowler is Deputy Administrator and Director of the Center for Medicare and Medicaid Innovation at CMS. Dr. Fowler previously served as Executive Vice President of programs at The Commonwealth Fund and Vice President for Global Health Policy at Johnson & Johnson. Before that, she was special assistant to President Obama on health care and economic policy at the National Economic Council. From 2008 to 2010, she was Chief Health Counsel to Senate Finance Committee Chair, Senator Max Baucus (D-MT), where she played a critical role developing the Senate version of the Affordable Care Act. She also played a key role drafting the 2003 Medicare Prescription Drug, Improvement and Modernization Act (MMA). Dr. Fowler has over 25 years of experience in health policy and health services research. She earned a bachelor’s degree from the University of Pennsylvania, a Ph.D. from the Johns Hopkins Bloomberg School of Public Health, and a law degree (J.D.) from the University of Minnesota. She is admitted to the bar in Maryland, the District of Columbia, and the U.S. Supreme Court. Dr. Fowler is a Fellow of the inaugural class of the Aspen Health Innovators Fellowship and was elected to the National Academy of Medicine in 2022.

JESSICA HINSHAW, Director, Environmental Health, Population Health Division, National Association of Community Health Centers

Jess Hinshaw is the Director of Environmental Health in the Population Health Division at the National Association of Community Health Centers (NACHC). In her role, she works alongside community health centers engaging in environmental health work and oversees initiatives that build
climate resilience, promote learning about the health impacts of climate change, and address environmental justice issues. Jess’s work has focused on community-based participatory research in public health and environmental health. Before coming to NACHC, Jess held various positions with AMOS Health and Hope in Managua, Nicaragua focused on community based primary health care. She also served as the Health Equity Evaluator at the New Mexico Department of Health in response to COVID-19. In addition to her role at NACHC, Jess leads a course on Monitoring and Evaluation for non-profits and civil society organizations at the United Nations University for Peace, in San Jose, Costa Rica. Jess received her Master of Public Health from Vanderbilt University and is also currently a doctoral candidate at the George Washington University.

CHERYL HOLDER, President, Florida State Medical Association, Founder and Co-Chair, Florida Clinicians for Climate Action, Co-Chair, Miami Dade Heat Health Task Force

Dr. Cheryl L. Holder, a graduate of Princeton University and George Washington University School of Medicine, a National Health Service Corp Scholar, Internist, and HIV Specialist served as Medical Director of one of Miami’s largest community health centers and on NIH and CDC health advisory and programmatic review panels. She dedicated her career to improving health of underserved populations. In 2009, she joined Florida International University’s Herbert Wertheim College of Medicine’ faculty, where she taught about the social determinants of health, diversity, and the health impact of climate change. She retired 12/31/22, as the Associate Dean of Diversity, Equity, Inclusivity and Community Initiatives. Her leadership roles include organizations such as president of Florida State Medical Association, Founder and Co-Chair of Florida Clinicians for Climate Action and Co-chair of Miami Dade Heat Health Task Force. Her TED Talk “The link between climate change, health and poverty” garnered over 300,000 views.

VANESSA KERRY, CEO and co-founder, Seed Global Health

Dr. Kerry is the co-founder and CEO of Seed Global Health (Seed), a non-profit organization focused on health systems strengthening and transformation through long-term investments and training of the health workforce. Under her leadership, Seed has helped educate more than 47,000 doctors, nurses, and midwives in seven countries, helping to improve health care for more than 76 million people.

In June 2023, Dr. Kerry was appointed WHO Special Envoy for Climate Change and Health. She has spoken and written about the effects of climate change on human health and health systems and the need to integrate a health-centered response into climate change mitigation and adaptation measures. Dr. Kerry supported the UAE COP28 Presidency to shape the first-ever COP Day of Health in 2023 and continues to lead efforts globally to ensure equitable and just climate action. As co-chair of a workstream on the World Health Organization’s Public Health and Emergency Health Workforce Roadmap, Dr. Kerry is helping to galvanize consensus for effective pandemic preparedness with a focus on protecting, expanding, and supporting our health workforce globally.
NAM Climate and Health Day
Speakers

She is the Director of the Program in Global Public Policy at the Massachusetts General Hospital and Harvard Medical School where she has focused on links between security and health. She has taught courses on the intersection of health, economy, politics and security at the Harvard Kennedy School and Yale University. Dr. Kerry is a World Economic Forum Young Global Leader, and a member of the Council on Foreign Relations and sits on several boards. She is on the editorial board of New England Journal of Medicine Evidence and Annals of Global Health.

Dr. Kerry graduated from Yale University and Harvard Medical School with honors, completing her clinical training at MGH. She earned a master's degree in health policy, planning, and financing from the London Schools of Economics and of Hygiene and Tropical Medicine. She is the mother of two children.

MAUREEN LICHTVELD, Dean, School of Public Health, Jonas Salk Chair in Population Health, Professor, Environmental and Occupational Health, University of Pittsburg

Dr. Maureen Lichtveld, a member of the National Academy of Medicine (NAM), is the Dean of the School of Public Health, the Jonas Salk Chair in Population Health, and Professor of Environmental and Occupational Health at the University of Pittsburgh with over 35 years of expertise in environmental health. As Dean, Dr. Lichtveld oversees seven academic departments, 1000 students, 165 faculty and 320 staff. Her research focuses on environmentally-induced disease, community-engaged environmental epidemiology studies, health disparities, climate and health, environmental health policy, disaster preparedness, public health systems, and community resilience. Her expertise in Climate and Health is locally, nationally, and globally recognized. She is actively involved in Caribbean-wide climate and health research and research training examining the impact of climate change on weather patterns and associated contamination of seafood as a food safety and security issue, and climate adaptation associated with the impact of coastal erosion on forced migration of indigenous nations including pregnant women with minimal access to health services. She provides technical expertise to several NAM and NASEM committees, including the NAM Grand Challenge in Climate and Health, and the Climate Security Roundtable. Dean Lichtveld is a member of the NAM Council, and a member of numerous NAM and National Academies of Sciences Engineering and Medicine (NASEM) Boards, Roundtables, and Committees. She is also a member of the National Research Council (NRC). Dean Lichtveld is the Chair of the Consortium of Universities for Global Health (CUGH). She has co-authored the textbook on Environmental Policy and Public Health. Honors include Johns Hopkins University Society of Scholars, CDC Environmental Health Scientist of the Year, and Woman of the Year of the City of New Orleans for her contributions to science.

EMILY “EMMIE” MEDIATE, Chief Program Officer, Health Care Without Harm

As Health Care Without Harm's U.S. Chief Program Officer, Emmie leads the organization’s programs in developing strategies to engage the health care sector in addressing climate change and advancing health and equity. Prior to joining the organization, Emmie oversaw COVID-19 response and recovery as the Regional Coordinator for Mid-Atlantic Region III at the CDC Foundation. She also previously served as the Chief of Staff at the American Flood
NAM Climate and Health Day

Speakers

Emmie has worked as the Director of Presidential Affairs at the Planned Parenthood Federation of America and as an International Development Fellow on a USAID-funded project in Uganda. She was formerly a Special Assistant at the Baltimore City Health Department and a health policy fellow in the Office of Senator Michael Bennet (D-CO). Emmie graduated from the University of Notre Dame with a B.A. in Health Studies and Africana Studies. She also holds two master’s degrees from the University of Oxford, where she studied as a Rhodes Scholar.

TAMER RABIE, Global Program Lead for Climate and Health, World Bank

Tamer Rabie, MD, is the Global Program Lead for Climate and Health at the World Bank. He joined the Bank in 2005 and has since been leading lending as well as advisory services programs across more than thirty countries across all regions, including those characterized by fragility, conflict and violence. He has over twenty-five years of wide-ranging policy, public health and health systems experience including in climate change, nutrition, reproductive health, service delivery, governance, the private sector, and environmental health. As a medical doctor and public health specialist, he has always remained acutely aware that addressing global health challenges transcends the confines of healthcare alone and necessitates a comprehensive approach encompassing social, economic, and environmental policies, among others. Having worked on the nexus of climate and health since 2008, he has helped the World Bank shape its vision on climate action. In his current role as the Global Program Lead for Climate and Health, Dr. Rabie leads the World Bank’s efforts in addressing the climate-health crisis by scaling country tailored solutions, delivering global public goods, and forging partnerships with other development partners, the private sector and civil society organizations.

NAVEEN RAO, Senior Vice President, Health Initiative, The Rockefeller Foundation

Dr. Naveen Rao is the Senior Vice President of the Health Initiative at The Rockefeller Foundation where he leads the Foundation’s efforts to shape the field of Climate and Health, transforming the world’s health systems to be more equitable, inclusive and resilient to climate change and improving the ability to predict, detect, and respond to climate-sensitive disease threats.

Dr. Rao previously led the Foundation’s Covid-19 pandemic efforts, including the Global Vaccination Initiative, which increased vaccination uptake in low and middle-income countries, as well as the Foundation’s Pandemic Prevention Initiative, which strengthened global pathogen surveillance and response around the world.

Dr. Rao joined The Rockefeller Foundation after a 25-year career with Merck & Co., Inc., where he most recently led Merck for Mothers, the company’s 10-year, $500 million initiative to reduce maternal mortality around the world. Prior to Merck, he was the Associate Director of the Department of Medicine at Beekman-Downtown Hospital and practiced Internal Medicine in New York City for 10 years. Dr. Rao is Board Certified in Internal Medicine and is a Fellow of the American College of Physicians.
NAM Climate and Health Day

Speakers

JONATHAN B. PERLIN, President and CEO, The Joint Commission

Jonathan Perlin, MD, PhD is President and CEO of The Joint Commission Enterprise which includes The Joint Commission, Joint Commission Resources (JCR), Joint Commission International (JCI) and the National Quality Forum (NQF). Previously, as President, Clinical Operations and Chief Medical Officer, HCA Healthcare, Perlin led clinicians, data scientists and researchers in developing a learning health system model for improving care across 189 hospitals. His team’s work achieved national recognition for preventing elective pre-term deliveries, reducing maternal mortality, increasing sepsis survival, and developing public-private-academic partnerships for improving infection prevention and treating COVID-19. Before HCA, Dr. Perlin was Under Secretary for Health in the U.S. Department of Veterans Affairs (VA). He led VA to national prominence for clinical performance. An elected member of the National Academy of Medicine (NAM), he has co-chaired initiatives on digital health, combating opioids and climate change. He has served on numerous Boards and Commissions and holds faculty appointments at Vanderbilt University as a Clinical Professor of Medicine and at Virginia Commonwealth University as an Adjunct Professor of Health Administration.

JUDITH RODIN, President Emerita, University of Pennsylvania and Past President, The Rockefeller Foundation

Judith Rodin is a pioneer, innovator, change-maker and global thought-leader. For over two decades Rodin led and transformed two global institutions: The Rockefeller Foundation and the University of Pennsylvania. A ground-breaking executive throughout her career, Dr. Rodin was the first woman named to lead an Ivy League Institution and was the first woman to serve as The Rockefeller Foundation’s president. A research psychologist by training, she was one of the pioneers of the behavioral medicine and health psychology movements. Dr. Rodin’s leadership ushered The Rockefeller Foundation into a new era of strategic philanthropy that emphasized partnerships with business, government, and the philanthropic community to address and solve for the complex challenges of the 21st century. Rodin championed two whole new fields that are now pervasive: resilience and impact investing. At Penn, Dr. Rodin presided over an unprecedented decade of growth and progress that transformed the institution, its campus, and the community, taking the university from sixteenth to fourth in U.S. News and World Report national rankings. The University also engineered a comprehensive, internationally acclaimed neighborhood revitalization program in West Philadelphia. Rodin has served as a member of the board for several leading corporations and many non-profits. She has authored more than 250 academic articles and chapters, and has written or co-written 15 books, including The Power of Impact Investing: Putting Markets to Work for Profit and Global Good and The Resilience Dividend: Being Strong in a World Where Things Go Wrong. Her most recent book, Making Money Moral: How a New Wave of Visionaries is Linking Purpose and Profit, was published in February 2021 by Wharton School Press.
NAM Climate and Health Day

Speakers

RENEE SALAS, NAM Interest Group-19 Chair (ex-officio), Harvard Medical School and Massachusetts General Hospital

Dr. Renee N. Salas is the Founding Director of The Cooperative. She is a guest editor for The New England Journal of Medicine (NEJM) Group’s “Fossil-fuel Pollution and Climate Change” series and serves as the Co-Director of NEJM Group’s Climate Crisis and Clinical Practice Initiative. Dr. Salas is also a member of the global Lancet Countdown on Health and Climate Change, serving as the lead author of the U.S. Brief between 2018 to 2021 – moving to senior author in 2022 – and founded and leads the U.S. Brief Working Group of over 80 U.S. organizations. Dr. Salas was elected to the National Academy of Medicine (NAM) in 2021 for her work in climate change and health and serves as the Climate Change Interest Group Chair. She is on the Steering Committee for the NAM Grand Challenge on Climate Change, Health, and Equity, and she also serves on the Advisory Committee for The National Academies Climate Crossroads initiative. She speaks at high-level engagements across diverse sectors, including testifying before Congress at the White House Health Equity Forum, and engages in research to explore how climate change is impacting the health care system. Dr. Salas is an emergency medicine physician in the Center for Social Justice and Health Equity in the Department of Emergency Medicine at Massachusetts General Hospital and Harvard Medical School and holds a variety of appointments across Harvard University. She received her Doctor of Medicine from the innovative five-year medical school program to train physician-investigators at the Cleveland Clinic Lerner College of Medicine with a Master of Science in Clinical Research from the Case Western Reserve University School of Medicine. Her Master of Public Health is from the Harvard T.H. Chan School of Public Health with a concentration in environmental health.

NATHANIEL SMITH, Founder and Chief Equity Officer, Partnership for Southern Equity

Nathaniel Smith is the founder and Chief Equity Officer of the Atlanta-based Partnership for Southern Equity. A child of Southern Freedom Movement Activists, Smith works to advance racial equity through an equity agenda, which advances just outcomes that are sensitive to the needs and circumstances of communities – erasing barriers to success and creating the conditions that enable just and fair inclusion into a society in which all people can participate, prosper and reach their full potential. Under Smith’s leadership, PSE created the South’s first equity-mapping tool, the Metro Atlanta Equity Atlas and led a coalition of diverse stakeholders to support a $13 million transit referendum that expanded MARTA into a new county for the first time in 45 years. Through its COVID-19 Rapid Relief Fund, PSE distributed more than $500,000 to more than 30 organizations because of the initial investment of the Community Foundation for Greater Atlanta and the United Way of Greater Atlanta.

Smith’s leadership was instrumental in partnering with several organizations to create the Justice40Accelerator, designed to provide organizations with innovative front-line community climate projects the assistance to better position them to pursue and win federal funding.
Smith’s accomplishments include numerous awards and distinctions, including being named an inaugural recipient of Bank of America’s Neighborhood Builders: Racial Equality award, and being named co-chair of the Drawdown Georgia Leadership Council, which addresses climate change in Georgia through the intersection of climate and equity.

NEIL VORA, Policy Fellow, Conservation International

Neil Vora, MD, is a policy fellow at Conservation International where he leads its efforts on pandemic prevention. He served for nearly a decade with the US Centers for Disease Control and Prevention (CDC), including as an Epidemic Intelligence Service officer and a Commander in the US Public Health Service. Neil deployed for CDC to Liberia in 2014 and to the Democratic Republic of the Congo in 2019 to assist in the responses to the two largest Ebola outbreaks ever. He also led the investigation of a newly discovered smallpox-like virus in the country of Georgia in 2013. From 2020-2021, Neil developed and led New York City’s COVID-19 contact tracing program, overseeing a team of over 3,000 people. He has published more than 80 articles in leading outlets such as the New York Times, Nature, New England Journal of Medicine, and JAMA. He is an Associate Editor at CDC’s Emerging Infectious Diseases journal, an Adjunct Professor of Internal Medicine and Infectious Diseases at Columbia University, and a Presidential Leadership Scholar. He is currently co-chairing a Commission for The Lancet on prevention of viral spillovers. He still sees patients in a public tuberculosis clinic in New York City. Outside of work, Neil loves to spend time with his rescue pets and to train in Brazilian jiu jitsu.

SEEMA WADHWA, Executive Director, Environmental Stewardship, Kaiser Permanente

Seema Wadhwa, recognized as a Time100 Climate Leader, serves as the Executive Director of Environmental Stewardship at Kaiser Permanente, the largest nonprofit, integrated health system in the U.S. In this capacity, Seema orchestrates a comprehensive portfolio, spanning operational sustainability, the cultivation of resilient communities, and the adaptation of patient care to meet the demands of our changing climate. Driven by a commitment to catalyzing transformative change, Seema provides leadership and technical expertise to external coalitions, policy forums and other collaborative initiatives, advocating for putting health at the center of climate action.

Previously, Seema built and shaped the sustainability strategy at Inova Health System as the Assistant Vice President of Sustainability and Wellness. Her expertise helped lay the groundwork for transformative change within the organization. As a national director for the Healthier Hospital Initiatives, she galvanized a network of over 1,300 hospitals toward sustainability.

Seema’s commitment to sustainability resonates through her extensive speaking engagements and publications, including her co-authorship of multiple pioneering books on healthcare sustainability leadership. With a Civil Engineering degree from the University of Alberta and a Masters of Liberal Arts degree from Harvard University Extension School, her journey from building neighborhoods to fostering
healthier, more equitable communities reflects her unwavering dedication to creating a healthier future for all.

**JOSHUA B. WEIL, Emergency Physician, Kaiser Permanente**

Dr. Weil is an Emergency Physician at Kaiser Hospital in Santa Rosa since 1998. He grew up in Northern California and completed his B.A. degree at the University of California, San Diego, his medical degree from the University of Illinois, Chicago, and then his residency training at UC Davis Medical Center. He has served numerous senior leadership roles locally and regionally with Kaiser Permanente, Northern California. In 2017 he was on duty in the Emergency Department when the Tubbs Fire swept through Santa Rosa, CA, destroying over 5000 buildings and causing widespread destruction. He was the Incident Commander responsible for evacuating Kaiser Hospital. A strong interest in volunteerism and disaster medicine has taken him to Sri Lanka following the tsunami, Louisiana after Hurricane Katrina, Haiti to respond to the earthquake, and the Philippines following Typhoon Haiyan. Locally he has served on the Board of Directors for the American Red Cross Sonoma/Lake/Mendocino Chapter since 2011 and the Board of Directors for the Ceres Project since 2014. He has been a regular volunteer at the Jewish Community Free Clinic for almost 25 years and in 2014 assumed the role of Medical Director there. He has also served as “team physician” for local high school football teams for over 2 decades.

Dr. Weil lives in Santa Rosa with his wife and many pets. He does his best to make time for San Francisco Giants games and his passion for golf. He has competed in endurance triathlon and enjoys lots of travel.

**SACOBY WILSON, Professor, Department of Global Environmental and Occupational Health, School of Public Health, University of Maryland-College Park**

Dr. Sacoby Wilson is a professor with the Department of Global Environmental and Occupational Health (GEOH)(formerly known as the Maryland Institute for Applied Environmental Health), School of Public Health, University of Maryland-College Park. He has 25 years of experience as an environmental health scientist in the areas of exposure science, environmental justice, environmental health disparities, community-engaged research including community-based participatory research (CBPR), community science, and community-owned and managed research (COMR), and air quality studies including building hyperlocal air quality monitoring networks, Geographic Information Systems (GIS) including developing environmental justice screening and mapping (EJSM) tools, built environment, climate change, industrial animal production, climate change, community resiliency, and sustainability. He works primarily in partnership with community-based organizations to study and address environmental justice and health issues and translate research into action.
Ali Zaidi serves as Assistant to the President and National Climate Advisor. In this role, he leads the White House Climate Policy Office, which coordinates policy development and President Biden’s all-of-government approach to tackle the climate crisis, create good-paying, union jobs, and advance environmental justice. Zaidi is a longtime advisor to President Biden, having provided counsel and leadership on climate policy development, legislation, and executive action from day one of the Administration and on the Biden presidential transition and campaign. Before his current role, he served as Deputy National Climate Advisor. During his time in the Biden-Harris Administration, Zaidi has led on efforts to re-establish U.S. climate leadership, set a national target to cut greenhouse gas emissions by 50-52 percent by 2030; deliver robust executive actions, including regulatory, investment, and procurement-based initiatives; and secure the largest legislative wins on climate in U.S. history, through the Bipartisan Infrastructure Law and Inflation Reduction Act.
Nowhere are the effects of climate change manifesting more clearly than in human health. While many consider climate change to be a looming environmental threat—one that stands to impact future generations more so than today—millions of people die globally every year because of health issues linked to climate change. Further, these health threats and impacts are not evenly distributed or experienced across geographies or populations, but rather, are disproportionately burdening historically and currently marginalized populations, due to systemic inequities. The climate crisis is a public health and equity crisis that will continue to pose significant threats in the absence of concerted action.

Recognizing that climate change is among the most important and urgent global health threats and opportunities of the 21st Century, the U.S. National Academy of Medicine (NAM) launched a Grand Challenge on Climate Change, Human Health, and Equity in 2020. The Climate Grand Challenge is a multi-year global initiative to improve and protect human health, well-being, and equity by working to transform systems that both contribute to and are impacted by climate change. The initiative will highlight the most robust actions to address climate change that could yield a healthier, more equitable, and more resilient society. To this end, the Climate Grand Challenge has the following strategic objectives:

➢ Communicate the climate crisis as a public health and equity crisis. Across the Climate Grand Challenge workstreams, the NAM will communicate and elevate the impacts of climate change on health and equity, as well as evidence-informed opportunities for mitigation, adaptation, and resilience. Public awareness of the health impacts of climate change and the current urgency of the issue is low, but protecting personal and public health is an important value to Americans that can translate to supporting climate solutions. Given this, the NAM sees a unique opportunity to utilize its reputation as an independent and trusted messenger to spearhead communications that will use action-based, inclusive messaging, and will engage, inform and mobilize health professionals, policymakers, community leaders, and the public to create change. The NAM will collaborate with existing domestic and global initiatives to extend the reach and impact of these messages.

➢ Develop a comprehensive roadmap for systems transformation. It is widely understood that major sectors of the global economy, such as agriculture, transportation, and energy, contribute to and are affected by climate change. Especially considering climate change’s significant impacts on health, the multifaceted health and equity co-benefits of decarbonizing and enhancing the climate resilience of these sectors merit urgent attention. To date, no comprehensive studies have examined the compounding climate, health, and equity-related effects of decarbonizing these sectors. There is a need to examine these intersections and employ systems approaches to chart a path toward a more equitable, climate- and health-sustaining global economy. To address this need, the NAM will form an independent and multidisciplinary International Commission to produce a consensus report that examines the evidence to provide a vision, strategy, and recommendations for systems transformation toward a global economy that promotes health, well-being, and equity within planetary boundaries. Specifically, the roadmap will lay out the critical opportunities to reframe the economic model in this way and provide recommendations for policymakers, as well as public and private sector leaders and entities, to facilitate this transformation. The Commission is anticipated to launch in 2024.
➢ **Reduce the carbon footprint of the U.S. health sector.** While transformation is necessary across all major systems, there is an immediate, actionable opportunity for the NAM to catalyze transformation within the U.S. health sector, which is responsible for 8.5% of U.S. carbon emissions and 25% of health sector carbon emissions worldwide. As such, NAM launched an [Action Collaborative on Decarbonizing the U.S. Health Sector](#) (Climate Collaborative) in 2021. The Climate Collaborative is a public-private partnership, mobilizing over 60 leaders from across the federal government, biomedical and pharmaceutical industries, hospital systems, private payers, health professions, and more, to co-develop and implement a shared action agenda to reduce the carbon footprint of the health sector and strengthen its resilience. The Climate Collaborative is focused on four priority areas, including: health care supply chain and infrastructure; health care delivery; health professional education and communication; and policy, financing, and metrics. The Collaborative will operate on 2-year renewable cycles. The first cycle began in September 2021 and will run through December 2023, and the second cycle will launch in January 2024. It is anticipated that it will take a minimum of 2-3 cycles to achieve the Collaborative's goals.

➢ **Accelerate research and innovation at the nexus of climate change, human health, and equity.** The Climate Grand Challenge aims to create novel and innovative mechanisms to inspire and support transformative ideas at the intersection of climate change, human health, and equity. NAM will lead a set of activities that will seek to: develop a research agenda by engaging transdisciplinary and intergenerational researchers and innovators to fill critical evidence gaps; build a supporting, searchable database; catalyze, inspire, and support transformative ideas and solutions across the globe; accelerate translational science to drive implementation and scaled-up practice; and stimulate greater funding and investment into the field from the public and private sectors.

➢ As noted, **reducing climate-related health inequities** is a central tenet of the Climate Grand Challenge. Historically and currently underserved and marginalized communities are too rarely engaged in the conversations and decisions that affect community health and well-being—and this is especially true in the context of climate change. In response to this, the NAM will create a [Climate Communities Network](#) (CCN)—comprised of community leaders who work for community-based organizations and invited representatives from government, philanthropy, academia, and industry—to inform the strategic direction and outcomes of the Climate Grand Challenge. The CCN will serve as a community of practice for sharing challenges, best practices, and learnings - ultimately facilitating local efforts to address the structural drivers of climate-related health inequities. In creating this network, NAM will leverage its platform and privilege to amplify the wisdom of frontline and fenceline communities, who best understand their strengths and needs and, with the appropriate resources, can bring their own innovative solutions to bear.

Climate change will continue to have significant impacts on human health globally if left unabated. Improving and sustaining human health, well-being, and equity in the context of climate change is the grand and defining challenge of our time but one ripe with opportunity. The NAM Climate Grand Challenge will seize on this critical need and opportunity by leveraging the NAM’s unparalleled independence, objectivity, convening power, and community of experts to advance the evidence, catalyze national and global communities, and accelerate the pace of research and innovation necessary for transformation. The NAM will serve as a unifying hub for any organization or individual who cares about this issue to come together and take action, to ultimately catalyze a climate and health movement.
The health sector is a key contributor to climate change, generating 4.4% of carbon emissions globally and 8.5% of emissions in the United States. We must collectively address climate change as an existential threat to human life, health, and well-being. Important work is underway, as the health sector is primed to act and make changes to improve the lives of communities around the country. Together, we can address the health impacts of climate change and accelerate the groundswell of support and action across our sector to make further progress every day.

Your role in the Climate and Health Movement

Join the National Academy of Medicine (NAM) in Accelerating the National Climate and Health Movement to build and sustain momentum toward decarbonizing the health sector while strengthening its sustainability and resilience. This initiative will energize the entire U.S. health sector by providing guidance, resources, and facilitating relationships across participant organizations. By joining, your organization will have opportunities to forge new and exciting collaborations at virtual and in-person events, such as roundtables and an annual climate and health summit, receive highlights about the most impactful climate work, and track collective progress.

The NAM will serve as a coordinating body that provides opportunities for:

- Increasing visibility of existing efforts
- Forming new connections, opportunities, and partnerships
- Highlighting progress and achievements
- Receiving early access to NAM resources and events
- Showcasing the landscape of actors and actions
- Learning opportunities from leading organizations in climate and health

Your organization will also be featured in a digital showcase later this year, illustrating the full landscape of health-related organizations working toward key climate change-related goals. The NAM welcomes any health-related organization to join us in accelerating the national climate and health movement, no matter where they are in their sustainability journey.

About the NAM’s Commitment to Addressing Climate and Health

In 2021, the NAM launched the Action Collaborative on Decarbonizing the U.S. Health Sector—a public-private partnership of over 130 organizations, all committed to co-developing and implementing a shared action agenda to address the health sector’s environmental impact. The Collaborative is a part of the NAM’s Grand Challenge on Climate Change, Human Health, and Equity—a multi-year global initiative to improve and protect human health, well-being, and equity by working to transform systems that both contribute to and are impacted by climate change.

Learn more & accelerate the movement:
nam.edu/ClimateMovement
About the Grand Challenge on Climate Change and Human Health

The Climate Collaborative is a part of the NAM Grand Challenge on Human Health and Climate Change - a multi-year global initiative to improve and protect human health, well-being, and equity by working to transform systems that both contribute to and are impacted by climate change. Learn more at nam.edu/ClimateChange.

About the National Academy of Medicine

Part of the National Academies of Sciences, Engineering, and Medicine, the NAM is an independent organization of eminent professionals and serves alongside the National Academy of Sciences and the National Academy of Engineering as an adviser to the nation and the international community. Through its domestic and global initiatives, and unique ability to assemble the nation’s most eminent scholars and experts, the NAM works to address critical issues in health, medicine, and related policy, and inspire positive action across sectors. Learn more at nam.edu.
Historically and currently marginalized communities are rarely engaged in an equitable way when it comes to decisions which impact their health. This is especially true in the context of climate change. The drivers and impacts of climate change have serious health and equity implications that affect community well-being. The impacts of climate change (e.g., extreme temperatures, more damaging storms, rising sea levels), coupled with unfair social and economic factors, such as racism and poverty, compound health inequities in this country. By advancing climate and health solutions that are fair, equitable, and designed to advantage people who have been historically and are currently marginalized, we can help reduce and mitigate the exacerbation of existing health inequities, while simultaneously creating healthier environments in which all people can thrive.

**Climate Communities Network**

The Climate Communities Network (CCN) was launched in 2023 and exists to engage and center the expertise of communities in areas which are most negatively impacted by climate change to address related health inequities. The network brings together leaders from community-based organizations (“CCN Members”) and other experts (“CCN Strategic Partners”) from across sectors, geographies, and disciplines—including government, philanthropy, academia, and industry—to identify, develop, and implement community-driven solutions to climate-related health inequities. Learn more about current CCN Members and Strategic Partners.

The CCN will work collaboratively to address the structural drivers of climate-related health inequities at the local level and amplify community expertise in the national conversation on climate and health. To achieve these goals, the CCN will focus on several impact areas, including policy, funding and research, capacity building, and youth engagement.

Key objectives of the Network include:

1. Creating a platform for climate-impacted communities to share challenges, learnings, and opportunities.
2. Elevating community wisdom to inform climate-related policy, investments, and research decision-making.
3. Sharing outcomes, lessons learned, and best practices gleaned from this work across the National Academies and with peer organizations.

The National Academy of Medicine (NAM) is committed to leveraging its platform to co-create opportunities for CCN Members to build relationships with other experts addressing climate change and health equity; elevate their community’s strengths, needs, and achievements; and access tools to catalyze innovation. Ultimately, the CCN will provide a forum to reimagine systems and infrastructures that prioritize and protect the health of communities most affected by climate change.

**About the Grand Challenge on Climate Change and Human Health**

The CCN is a part of the NAM’s Grand Challenge on Human Health and Climate Change - a multi-year global initiative to improve and protect human health, well-being, and equity by working to transform systems that both contribute to and are impacted by climate change. The CCN will work across the Grand Challenge to inform the strategic direction and outcomes of the overall initiative. Learn more at nam.edu/ClimateChange.
The Research and Innovation (R&I) program seeks to catalyze research to advance the understanding of linkages between climate change, human health, and equity. The National Academy of Medicine (NAM) will develop a research agenda centered around research gaps at the intersection of climate change, health, and equity. The program will further catalyze regional research and innovation hubs with the aim to advance action-orientated research and transformative innovation and to reduce the risks from climate change, particularly for countries and communities that are most vulnerable – at the scale and urgency required.

Historically, research and evidence has remained siloed and fragmented which limits the global understanding of the impacts of climate change. The first initiative within the R&I program includes catalyzing regional hubs that will elevate, and support research and innovation led by local and global partners and facilitate uptake and translation to policy. The research hubs will also provide a foundation for capacity building and bidirectional knowledge exchange.

There is a need to correct the historic global imbalance in climate and health research and strengthen research capacity in low- and middle-income countries. The regional hubs would leverage a partnership approach that centers researchers and innovators in low-income countries and bring together diverse stakeholders across regions to share learnings, best practices, solutions, tools, and resources to address climate change impacts on health.

The hubs would serve as a strategic platform for collaborative action to accomplish the following objectives:

1. **Strengthen regional scientific capacity**: workforce and training; surveillance and monitoring; community engagement; facilitate uptake to policy
2. **Leverage regional leadership**: creating a shared regional research and innovation agenda that spans borders, disciplines, and sectors
3. **Accelerate innovation**: identify promising innovations from local communities to maximize their impact across a region; network of researchers and innovators to facilitate collaboration and share lessons learned
4. **Scale solutions**: share lessons and solutions across countries within a region and across regional hubs

The second initiative within the R&I program includes partnering with Kaiser Permanente to implement a five-phase approach to build a climate and health research agenda and supporting web portal that will be accessible to a wide range of audiences. The research agenda will identify and fill critical evidence gaps in climate and health research by mapping existing research efforts, identifying opportunities and evidence gaps in climate change and health research, facilitating dialogue among experts from a range of disciplines including community representatives, researchers, and policy makers, and catalyzing additional research funding. The aggregated information from this initiative will serve as a foundation for stronger climate and health communications and informed decision-making.

**About the Grand Challenge on Climate Change and Human Health**

The R&I program is one pillar of the NAM’s Grand Challenge on Human Health and Climate Change - a multi-year global initiative to improve and protect human health, well-being, and equity by working to transform systems that both contribute to and are impacted by climate change. Learn more at nam.edu/ClimateChange.