



THE “HOW” OF SYSTEMS TRANSFORMATION:

STRATEGIES AND LEVERS FOR HEALTH-CENTERED CLIMATE ACTION

VIRTUAL WORKSHOP

PART 2 | AUGUST 5, 2025

PART 3 | AUGUST 6, 2025



Participant Briefing Book



TABLE OF CONTENTS

Workshop Part 2-3 Agenda	1
Workshop Participant Guidelines	4
Speaker Biographical Sketches	6
Recap of Part 1, “The ‘How’ of Systems Transformation”	20
Background Reading and Reference Materials	
• Key Takeaways from Workshop 1, “The ‘What’ of Systems Transformation”	24
• Core Concepts & Working Definitions	27
• Submitted Materials for the Commission’s Consideration	29



The “How” of Systems Transformation: Strategies and Levers for Health-Centered Climate Action – Part 2 & 3

August 5-6, 2025, 9:00 AM – 12:30 PM EDT / 3:00 – 6:30 PM CEST | VIRTUAL

Join the U.S. National Academy of Medicine’s (NAM) [global expert Commission](#) for Part 2 & 3 of its virtual public workshop on the “how” of systems transformation for health-centered climate action. Across three parts and days, invited presentations and discussions will aim to:

- Identify the structural levers most critical to accelerating health-centered climate action and understand how these levers interact to drive systems transformation.
- Examine the enabling conditions that shape the feasibility and impact of these levers across diverse country and sectoral contexts.
- Distill real-world strategies and actions that have successfully mobilized these levers, highlighting what made them effective, who played critical roles, and under what conditions they gained traction.
- Surface critical barriers, trade-offs, synergies, and tipping points that shape the path to systems transformation, and distill actionable, cross-sector strategies that enable decision-makers to navigate complexity, align interests, and drive scalable impact.

Register and stream the live event [here](#).

Note, Part 1 of this workshop took place July 25, 2025; recording and materials will be made available [here](#).

PART 2 – August 5

9:00 – 9:15 AM EDT

Welcome and Opening Remarks

3:00 – 3:15 PM CEST

Michele Topf, *National Academy of Medicine*

Jonathan Patz, *University of Wisconsin-Madison* | NAM Commissioner

9:15 – 10:30 AM EDT

SESSION 4

3:15 – 4:30 PM CEST

Rethinking Economic Value in Climate-Health Action

Objective: Unpack how current economic systems value (or undervalue) climate-health solutions and explore practical shifts in valuation frameworks, decision-making norms, and institutional incentives that can prioritize prevention, equity, and resilience.

Moderator: Judith Rodin, *University of Pennsylvania* | NAM Commission Co-Chair

Invited Speakers:

- Amit Bouri, *The Global Impact Investing Network*

- Boon Heong Ng, *Temasek Foundation*
- Elizabeth Robinson, *London School of Economics and Political Science*
- Kevin Chika Urama, *African Development Bank*
- Stéphane Verguet, *Harvard University*

10:30 – 10:45 AM EDT
4:30 – 4:45 PM CEST

BREAK

10:45 AM – 12:20 PM EDT
4:45 – 6:20 PM CEST

SESSION 5

Mobilizing & Redirecting Capital for Climate-Health Action

Objective: Explore how financial architecture, investment vehicles, and institutional reforms can translate redefined value into real capital flows, surfacing practical insights to fund climate-health solutions at the pace and scale required.

Moderator: Tamer Rabie, *World Bank Group* | NAM Commissioner and workshop planning committee member

Invited Speakers:

- Sara Jane Ahmed, *V20 Finance Group of Ministers*
- Jessica Brown, *ClimateWorks Foundation*
- Martin Edlund, *Health Finance Coalition*
- Nancy Pfund, *DBL Partners*
- Vera Songwe, *Liquidity and Sustainability Facility*

12:20 – 12:30 PM EDT
6:20 – 6:30 PM CEST

PART 2 Wrap-Up & Adjourn

Michele Toplitz, *National Academy of Medicine*

PART 3 – August 6

9:00 – 9:15 AM EDT
3:00 – 3:15 PM CEST

Welcome and Opening Remarks

Michele Toplitz, *National Academy of Medicine*

Victor J. Dzau, *National Academy of Medicine*

9:15 – 10:45 AM EDT
3:15 – 4:45 PM CEST

SESSION 6

Governing for Systems Change

Objective: Surface multilevel governance architectures—from global compacts to sub-national taskforces—that successfully align climate and health agendas, and distil the coordination functions, power dynamics, and incentive structures the Commission must address to support durable, integrated systems change.

Moderator: Lewis Akenji, *Hot or Cool Institute* | NAM Commissioner

Invited Speakers:

- H.E. Jean Kaseya, *Africa Centers for Disease Control and Prevention*
- Nuin-Tara Key, *California FWD*
- Ilona Kickbusch, *Graduate Institute in Geneva*

- María Susana Muhamad González, *formerly Ministry of Environment & Sustainable Development, Colombia*

10:45 – 11:00 AM EDT
4:45 – 5:00 PM CEST

BREAK

11:00 AM – 12:10 PM EDT
4:45 – 6:20 PM CEST

SESSION 7

Legal & Policy Levers for Systems Change

Objective: Examine how legal, regulatory, and policy instruments can embed accountability, shift power, and enable systems-level change by aligning policies, actors, and incentives across sectors and country contexts to advance scalable climate-health solutions.

Moderator: Omnia El-Omrani, *Global Climate & Health Alliance* | Workshop planning committee member

Invited Speakers:

- Ahmad “Rafay” Alam, *Pakistan Environmental Law Association*
- Joyeeta Gupta, *University of Amsterdam* | NAM Commissioner
- Laurence Tubiana, *European Climate Foundation*
- Nick Watts, *National University of Singapore*

12:10 – 12:30 PM EDT
6:10 – 6:30 PM CEST

Workshop 2 Closing Reflections & Adjourn

Howard Frumkin, *University of Washington* | NAM Commissioner

Michele Toplitz, *National Academy of Medicine*



NATIONAL ACADEMY OF MEDICINE
Initiative on Transforming Systems for Climate & Health

WORKSHOP PARTICIPANT GUIDELINES

The following provides information to help support participants' engagement in the workshop.

How to Watch

This workshop will be livestreamed on the workshop event page [here](#), and a recording of the event will be uploaded and available publicly available on this page at the conclusion of the event.

How to Participate

Throughout the workshop, we will be using an audience engagement platform for Q&A and live polls called “Slido,” which is directly embedded on the event page itself.

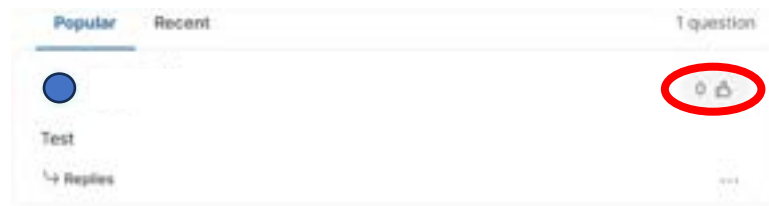
When you join, please enter your name, check “agree”, and then select “join Slido”:

A screenshot of the Slido join interface. At the top, the Slido logo is displayed in green. Below it, the text reads "Welcome to", followed by "NAM Climate and Health Workshop: The 'How' of Systems Transformation" in bold, and "Jul 25 - Aug 6, 2025" below that. There is a text input field labeled "Full name". Below the input field is a checkbox with the text "I agree to use my profile details while using Slido. Learn more". At the bottom, there is a large green button labeled "Join slido" and a smaller link labeled "Back to event".

Each session will include an Audience Q&A segment. To submit a question to the panelists, please navigate to the Q&A section at the top left of the Slido screen:

A screenshot of the Slido interface showing the Q&A section. The top navigation bar is blue and contains three items: "NAM Climate & He...", "Q&A" (which is circled in red), and "Polls". Below the navigation bar is a white box with a text input field labeled "Type your question". To the right of the input field is a character count "300". At the bottom right of the box is a green button labeled "Send".

Attendees also have the ability to “like” or “upvote” questions asked by other participants by selecting the “thumbs-up” icon to the right of the question:



In addition to Q&A, we may solicit additional input from attendees through live polls. These will appear to the right of the Q&A section during the event.



Participant Conduct

Please note that all participants of activities conducted by the National Academies of Sciences, Engineering, and Medicine (NASEM) are required to adhere to NASEM’s guidelines for preventing discrimination, harassment, and bullying. Please review and reference the full policy [here](#).

Troubleshooting

Should you encounter any difficulties in accessing our platform throughout the event, please reach out to NAM staff at NAMXClimateHealth@nas.edu.



NATIONAL ACADEMY OF MEDICINE

Initiative on Transforming Systems for Climate & Health

SPEAKER BIOGRAPHICAL SKETCHES



Sara Jane Ahmed serves as the Managing Director and V20 Finance Advisor to the Climate Vulnerable Forum and V20 Finance Ministers. The CVF-V20 is composed of 70 climate vulnerable developing countries. She is the Founder of the Financial Futures Center (FFC), a think tank focusing on analytics for the climate prosperity agenda.

She is an advisor to the Least Developed Country board member in the Green Climate Fund. She is also a member of the Task Force on Climate, Development and the IMF, the board of the Institute for Energy Economics and Financial Analysis (IEEFA), a trustee in Knox College and the advisory board of various institutions including the Global Renewables Congress and Climate Smart Ventures. She provides advisory support to governments and relevant partners on the energy transition and financial protection strategies. She was previously an energy finance analyst for IEEFA covering the Philippines and Bangladesh markets and an investment advisor for private equity groups specializing in originating and structuring energy opportunities. She received the 2021 Climate Breakthrough Project award. She holds an MS in Finance from the Simon Graduate School of Business, University of Rochester, Bachelors in Economics and an honorary Doctorate of Humane Letters from Knox College.



Lewis Akenji is Executive Director of Hot or Cool Institute. He is a political economist with an interest in institutions and policies, and the fair allocation of resources and opportunities for collective wellbeing within ecological limits. Lewis served as Executive Director of SEED, a UN partnership founded at the 2002 World Summit on Sustainable Development to promote entrepreneurship for sustainable development. Prior to that, he was Director for Sustainable

Consumption and Production at the Institute for Global Environmental Strategies in Japan. He has consulted with organizations including United Nations agencies, the Asian and African Development Banks, the European Commission, the Association of Southeast Asian Nations (ASEAN), and has served as technical or science-policy adviser to several national government delegations, including Finland, Japan, Sweden, Indonesia and Hungary. Lewis is a Full Member of the Club of Rome, and a Transformational Economics Commissioner with the Earth4All project, he is also a Board member of several organizations. Lewis has an M.Sc. Sustainable Resource Management (Technical University Munich, Germany) and a Ph.D. Political Economy (University of Helsinki, Finland).



Ahmad “Rafay” Alam is Pakistani environmental lawyer specializing in the energy, water, natural resources and urban infrastructure sectors. Mr. Alam has over two decades of experience in climate and environmental law and policy and regularly advises local and international clients on environment, water, sustainability, climate change, energy efficiency and air quality issues. Mr. Alam teaches climate law and policy at the Lahore University of Management

Sciences and has served as Chairman and Director of several public sector utilities in Pakistan. He is a Yale World Fellow and currently serves as Senior Advisor to Air Quality Asia and as a Member of the Hisaar Foundation Think Tank on the Rational Use of Water.



Amit Bouri is the Chief Executive Officer and Co-Founder of the GIIN, where he leads the largest global community of impact investors dedicated to increasing the scale and effectiveness of impact investing.

Amit co-founded the GIIN in 2009, following the launch of the Monitor Institute’s, [*Investing for Social and Environmental Impact*](#), a landmark report, which he helped to conceive and develop. His work would

eventually lead to the growth of a global network around the concept of impact investing and provide a blueprint that would seed the GIIN’s creation.

Today, Amit dedicates his work to engaging industry leaders, institutional investors, foundations and leading financial institutions all over the world to advocate for greater integration of social and environmental factors in all investment decisions, and to develop the tools and resources needed to effectively mobilize more capital towards impact investments.

He has authored many articles and has been frequently featured in leading publications such as the *Financial Times*, *The Economist*, *Al Jazeera*, *The New York Times*, *The Wall Street Journal*, *Bloomberg*, *Fast Company*, *Barron’s* and *Pensions & Investments*. He is also a sought-after speaker at events worldwide.

Amit has significant experience in both the for-profit and non-profit sectors and previously held positions at Bain & Company, Elizabeth Glaser Pediatric AIDS Foundation, and within the corporate philanthropy units of Gap Inc. and Johnson & Johnson. He holds an MBA from Northwestern University’s Kellogg School of Management, an MPA from Harvard University’s John F. Kennedy School of Government, and a BA in Sociology and Anthropology from Swarthmore College.

He lives in Brooklyn with his wife and their daughter, who inspire his life’s work to build a more sustainable and equitable future for all.



Jessica S. Brown is a Senior Director at ClimateWorks Foundation, a global platform for philanthropy to innovate and scale high-impact solutions that benefit people and planet. In this role, she directs climate adaptation and resilience work with 20 years of experience at the nexus of climate change, development, and poverty reduction in the Global South. Previously, Jessica spearheaded sustainable efforts at the Clean Cooling Collaborative and was a foreign affairs officer at

the U.S. State Department, where she led the international climate finance negotiations. She has also held various positions at the Overseas Development Institute, Climate Policy Initiative, and California Environmental Associates. She holds a master's from the London School of Economics and Columbia University.



Victor J. 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.



Martin Edlund is a founding member and Chief Executive Officer of Malaria No More, a globally recognized non-profit with the visionary mission to end humanity's oldest, deadliest disease in our lifetimes. During his tenure, Martin has played a lead role in mobilizing global political will, government resources, and innovations to scale life-saving interventions for the global malaria campaign. Martin also serves as Executive Director of the Health Finance Coalition, which is raising

substantial private capital to help achieve Africa's public health goals through blended-finance structures that count leading global corporates, major Development Finance Institutions (DFIs), and top foundations as investors. Martin lived and worked in West Africa as Malaria No More's Director of New Programs, where he helped lead innovative net distribution, testing and education campaigns with Youssou N'Dour, government officials, and media partners in Senegal, Cameroon, Tanzania, Nigeria, and Chad. Prior to joining MNM, Martin was a journalist for The Wall Street Journal, The New York Times, and The New Republic, and a political consultant in Washington, D.C., specializing in online campaign strategies. He is a graduate of Harvard University.



Omnia El Omrani is the Vice-Chair of the Global Climate and Health Alliance and an Egyptian medical doctor. She was the first official Youth Envoy to the Egyptian Minister of Foreign Affairs and COP27 President. She was then appointed as the Health Envoy and works as a Climate and Health Policy Fellow at Imperial College London. She is an MPP candidate at the Blavatnik School of Government at the University of Oxford. She serves as the co-lead of the Equity Group of the Lancet

Commission on Prevention of Viral Spillover. She also serves on two other Lancet Commissions on Sustainable Healthcare and Global Governance on Health and Our Common Air Commission.

She was selected as Apolitical's 50 Gender Equality Gamechangers in 2024 and Fast Company ME recognized her as one of the 35 Most Creative People in Business in 2023. She was awarded the 2023 Women of the Future, 50 Rising Stars in ESG.

She is serving as a member of the TED Countdown Vision Council and the Collective Minds Council. She was a member of the first Youth Sounding Board of the European Union DG-INTPA, an associate at Women Leaders for Planetary Health, and a member of the UNICEF-Az Youth Leaders Program and the New York Times Generation Climate Cohort. She has more than 8 years of experience working on climate change and health, has published 31 research papers and delivered over 120 hours of climate training in 15 countries.



Howard Frumkin, Professor Emeritus at the University of Washington School of Public Health, is a physician-epidemiologist specializing in environmental health.

His career has focused on health aspects of climate change, the built environment, nature contact, and sustainability, within the framework of Planetary Health. He has served as Director of the CDC's National Center for Environmental Health, as Dean of the University of

Washington School of Public Health, as head of the "Our Planet, Our Health" initiative at the Wellcome Trust, and as Senior Vice President of Trust for Public Land.

He is author or co-author of over 300 scientific journal articles and chapters, and his ten books include Making Healthy Places: Designing and Building for Health, Well-Being, and Sustainability (2nd Edition, 2022), Environmental Health: From Global to Local (3rd Edition, 2016), Planetary Health: Protecting Nature to Protect Ourselves (2020), and Planetary Health: Safeguarding Human Health and the Environment in the Anthropocene (2021). He is an elected member of the Washington State Academy of Sciences and of the National Academy of Medicine and is a Hagler Fellow at Texas A&M University. He was educated at Brown (AB), the University of Pennsylvania (MD), and Harvard (MPH and DrPH).



Joyeeta Gupta is Distinguished Professor of Climate Justice, Sustainability and Global Justice (University of Amsterdam), and is also Professor of Environment and Development in the Global South and holds a water professorship at IHE-Delft Institute for Water Education. She is the co-chair (2024-2025) of the UN Secretary General Appointed Group of Ten High-level Representatives of Civil Society, Private Sector and Scientific Community to Promote Science, Technology and

Innovation for the SDGs (10-Member-Group) - a component of the UN Technology Facilitation Mechanism. She is a Commissioner in the Global Commission on the Economics of Water and was Co-chair of the first phase of the Earth Commission (2019-2024), convened by Future Earth and the Global Commons Alliance during which time 22 publications were achieved with a top publication in Nature and in Lancet Planetary Health. She was awarded the 2023 Spinoza Prize - the highest distinction in Dutch science and also called the 'Dutch Nobel Prize' and was lead author of the Nobel Peace Prize winning report on climate change of the Intergovernmental Panel on Climate Change (IPCC).



H.E. Jean Kaseya was appointed Director-General of the Africa Centres for Disease Control and Prevention (Africa-CDC) in February 2023 during the African Union Summit. A Congolese medical doctor with over 25 years of experience in public health, Dr. Kaseya has worked both nationally and internationally, holding key positions in organizations such as UNICEF, Gavi, CHAI, and the WHO.

As Director-General, his primary focus is on strengthening health security across Africa through his "New Deal" for Africa CDC. This includes building sustainable financing, improving governance, and enhancing health systems to ensure a more agile response to health crises. Under his leadership, Africa-CDC took proactive steps during the mpox outbreak, declaring it a Public Health Emergency of Continental Concern and facilitating vaccine development and donations.

Dr. Kaseya's work has been central to mobilizing resources for pandemic preparedness and building resilient health systems in low-resource settings. His leadership focuses on fostering collaboration, enhancing regional health security, and ensuring sustainable investment in healthcare infrastructure.



Nuin-Tara Key is Executive Director of Programs at California Forward. In this role, she supports the overall strategy and development of programs across the organization. She has nearly 20 years of experience in climate adaptation and mitigation policy, climate finance, urban and regional planning, and social and environmental equity.

Prior to joining CA FWD, Nuin-Tara served as a Senior Advisor and Consultant, including working with Resilient Cities Catalyst (RCC) to stand up the [Mediterranean Climate Action Partnership](#) (MCAP) and support implementation of the [California Resilience Partnership](#) (CRP). She served as Director of the North America Public Sector Practice in the Climate and Resilience Hub (CRH) at WTW, a global risk and insurance firm, working with public sector clients to better manage climate risks and guide the transition to a net zero economy.

From 2016-2022, Nuin-Tara worked in the California Governor's Office of Planning and Research (OPR) as an appointee under Governors Brown and Newsom, including as Deputy Director for Climate Resilience. As part of the executive team, Nuin-Tara built the State's [Integrated Climate Adaptation and Resiliency Program](#) and oversaw development of state adaptation planning and implementation grant programs, the [Fifth California Climate Change Assessment](#) – including building the first of its kind Tribal Climate Research Grant Program – and coordinated the state's climate risk disclosure agenda, including integration of physical climate risk into state asset investments. She also served as Chair of the ICARP Technical Advisory Council and oversaw the development of the State's [Climate Adaptation Clearinghouse](#). Nuin-Tara also served as the state lead for long-term Community Planning and Capacity Building, under that California Disaster Recovery Framework.

Prior to OPR, Nuin-Tara co-founded an [international initiative](#) on community-based climate action, combining documentary film and policy research. She has worked in local and regional government, including building the first Regional Racial Equity Program at Metro, the regional government in Portland, OR. She has a Master of Urban and Regional Planning from Portland State University and a BA from Lewis and Clark College.



Ilona Kickbusch is the Director of the Digital Transformations for Health LAB at the University of Geneva and co-chair of the Council of the World Health Summit

Professor Kickbusch is a leading global health expert. She has contributed to many innovations, policies and educational initiatives during her distinguished career. She has received many prizes, honorary degrees and recognitions. She was awarded the Cross of the Order of Merit of the Federal Republic of Germany (Bundesverdienstkreuz) and the WHO Medal for contributions to global health. She is an honorary professor at the Charité, Berlin.

She continues to advise the WHO and is a member of the Global Preparedness Monitoring Board. She served as a member of the path-breaking WHO Council on the Economic of Health for All. She was key instigator of the Ottawa Charter for Health Promotion, WHO's Healthy Cities Network, WHO's Health Behavior and School Children Survey, health literacy and Health in All Policies. She has always been committed to women's health and rights and initiated the @wgh300 list of women leaders in global health.

She is the founder and Chair of the Global Health Centre at the Graduate Institute of International and Development Studies in Geneva and was the director of the Global Health Division at Yale University School of Public Health. She has pioneered new approaches to leadership training in global health: she initiated the first executive training in Global Health Diplomacy and is program chair of the leaders in health network SCIANA at Salzburg Global. She publishes widely in distinguished journals.

She was co-chair of the Lancet FT Commission on "Governing health futures 2030: growing up in a digital world" and is now working on following through on its recommendations, especially addressing the digital determinants of health.

She chaired the international advisory board for the development of the German global health strategy, advised on the establishment of the WHO Hub on Pandemic and Epidemic Intelligence in Berlin and has been involved in German G7 and G20 activities relating to global health as well as the global health initiatives of the German EU presidency in 2020. She works on a continuous basis with EU presidencies on global health and was advisor to the development of a revised EU Global Health Strategy. She is vice-president of the European Health Forum Gastein. She is a political scientist with a PhD degree from the University of Konstanz.



Susana Muhamad González, former president of COP16, the Conference of the Parties to the Convention on Biological Diversity, is a Colombian politician, environmentalist, and political scientist of Palestinian descent, a member of the Colombia Humana party. From August 7, 2022, to March 3, 2025, she served as Colombia's Minister of Environment and Sustainable Development. She is currently a presidential candidate for the internal consultation of the Pacto

Histórico.

Muhamad is a nationally, regionally, and internationally recognized environmentalist, and her work focuses on developing actions that will consolidate Colombia as a global power for life, complying with international agreements on climate change and biodiversity loss, working to protect environmental defenders, and combating deforestation in the Amazon Basin.

She has been recognized nationally and internationally for her leadership in environmental defense, including Woman of the Decade in Colombia by the Women Economic Forum, the first Colombian to receive a Global Leadership Award from the Vital Voices Global Partnership, among the world's 100 most important climate leaders by TIME magazine, and one of the 25 women global leaders in the fight against climate change, among other recognitions.

Muhamad holds a degree in Political Science from the Universidad de los Andes (2002) and a Master's degree in Sustainable Development Management and Planning from the University of Stellenbosch in South Africa.

She served as Secretary of the Environment and Secretary General of the Bogotá Mayor's Office. In 2019, she was elected city councilor, a position she held until the first half of 2022. In 2021, Muhamad was elected vice president of the national coordinating board of the Colombia Humana party, after the political movement officially received legal status.

Under her leadership as Minister of the Environment, Muhamad achieved the largest reduction in deforestation in the country in the last 23 years, spearheaded the ratification of the Escazú Agreement, and created the Fund for Life and Biodiversity, an unprecedented mechanism that finances environmental projects. She also hosted, organized, and led the negotiations for COP16 in Colombia and its closing in Rome, Italy, achieving historic funding for biodiversity protection and the creation of the Cali Fund and the subsidiary body for Indigenous Peoples and Local Communities.



Boon Heong Ng joined Temasek Foundation (TF) in 2020. Temasek Foundation spearheads programmes to pilot different innovative solutions and models to deliver impact for planet, people, peace and progress in Asia, including Singapore.

Prior to TF, Boon Heong was Managing Director Sustainability and concurrently Head Community Stewardship at Temasek. During this time, he led the pioneering efforts to set up both the sustainability and community stewardship teams at Temasek and developed strategies to deploy Temasek's community funds in support of Temasek's role as a Trusted Steward to connect people, uplift communities, protect planet and advance capabilities in Singapore and beyond. He also served a short stint as deputy CEO of Temasek Trust in 2022.

In his early years, Boon Heong also served in the Singapore Armed Forces and was intimately involved in technology development to build advanced warfighting capabilities in advanced sensors, autonomous vehicles and sense making. He has also worked with different stakeholders to deliver integrated and multi-source information fusion and

analysis products, scenario development and contingency planning including providing support to various SAF Humanitarian Assistance and Disaster Relief operations.

Boon Heong graduated with a Bachelor of Electrical and Electronic Engineering Honours from the Nanyang Technological University Singapore, holds a Masters in Business Administration from Singapore Management University and Masters in Systems Integration (Information Systems) from Naval Postgraduate School USA. He was the top Army graduate of the SAF Command and Staff College, graduated from the Indonesian Military's Joint Command and Staff College (SESKO TNI) and was awarded Public Administration Medal (Silver).



Jonathan Patz is Vilas Distinguished Achievement Professor, John P. Holton Chair of Health and the Environment, and inaugural director (2011-2022) of the Global Health Institute at the University of Wisconsin-Madison. He also has an Adjunct Professorship with the Division of Planetary Health at Monash University. Professor Patz is an elected member of the US National Academy of Medicine for his pioneering research on climate change and human health, and he

currently serves as Director and PI of the NIH-sponsored Health-First Climate Action Research Center at UW-Madison.

Dr. Patz served as Health Co-Chair for the first US National Climate Assessment – a mandated report to the US Congress – and for 15 years, served as a Lead Author for the United Nations Intergovernmental Panel on Climate Change (IPCC) – the organization that shared the 2007 Nobel Peace Prize. Some of his other awards include: the Aldo Leopold Leadership Fellows Award; shared Zayed International Prize for the Environment; Fulbright Scholarship; American Public Health Association's Homer Calver Award for environmental health leadership; Case Western School of Medicine Alumni Special Recognition award; Johns Hopkins Society of Scholars; Chanchlani Global Health Research Award.

Professor Patz has taught and conducted research on the health effects of climate change and global environmental change for nearly 30 years. His faculty appointment is jointly with the Department of Population Health Science and the Nelson Institute for Environmental Studies, and he currently directs the university's Planetary Health Scholars Program. He has published over 200 peer-reviewed scientific publications and several textbooks on these subjects.



Nancy Pfund, the founder of DBL Partners and a pioneer and leading player in impact investing, has demonstrated the potential of venture capital to drive social change and environmental improvement. She is an active voice in the field, frequently writing and speaking on impact and climate investing topics. Nancy serves on the boards of several companies, including Bellwether Coffee, Chestnut Carbon, Rain, Spatial, Zola Electric, and, prior to their public offerings, Tesla Motors (board observer), SolarCity, and Pandora. Prior to founding DBL, Nancy was a Managing

Director in Venture Capital at JPMorgan, having started her investment career at Hambrecht & Quist in 1984. Previously, Nancy worked at Intel Corporation, the State of California, Stanford University, and the Sierra Club.

In 2024, Nancy was awarded the distinguished Impact Leadership award from Impact Capital Managers, and Springboard Enterprise Investor of the Year. In 2023, she was recognized by the Forbes Women 50 Over 50: Investment list, and by the San Francisco Business Times as one of the Bay Area's 100 Most Influential Business Leaders. Among other awards, Nancy was previously named the 2022 Financial Woman of the Year by the Financial Women of San Francisco and to the Forbes 2020 Impact 50 List of the most notable impact investors. She was also a recipient of The Commonwealth Club 2018 Distinguished Citizen Award, the Earth Day Network 2018 Climate Visionary Award, and appeared on Fast Company's 2016 List of Most Creative People in Business.

Nancy serves as a member of the Board of Trustees of the National Geographic Society, where she sits on the Finance and Advancement Committees. She currently serves on the Finance, Philanthropy, and Executive Committees of the inaugural Board of Directors of the Foundation for Energy Security and Innovation (FESI). Nancy is a member and former Chapter Chair of the Silicon Valley Women Corporate Directors Foundation. She is a member and former chair of the Advisory Council of the Bill Lane Center for the American West at Stanford University; an advisor to the UC Davis Center for Energy Efficiency; and co-chairs the Yale School of Management Program on Entrepreneurship. She also serves on the Investment Advisory Committee of Prime Coalition, a nonprofit organization that steers and influences capital to support scalable solutions to climate change.

Nancy is a frequent lecturer on impact investing at Harvard Business School, Stanford Graduate School of Business, and the Yale School of Management. She is a past member of the C3E Ambassador to the U.S. Clean Energy Education and Empowerment Program, led by the U.S. Department of Energy. From 2001–2019, she was also a founding officer and director of ABC2, a foundation aimed at accelerating a cure for brain cancer. She was also a founding member of the California Clean Energy Fund from 2005 to 2012. She served as an Advisory Board member of Lawrence Berkeley National Laboratory (Berkeley Lab) and Cyclotron Road, its Clean Energy Incubator from 2014 to 2019.

Nancy received her BA and MA in anthropology from Stanford University, and her MBA from the Yale School of Management.



Tamer Rabie 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.



Elizabeth Robinson is professor of environmental economics, and acting Dean of the LSE's Global School of Sustainability, seconded from her role as Director of the Grantham Research Institute. She works primarily on climate change and health, with a focus on food security and undernutrition, heat and worker rights, and the design of policies and institutions to reduce climate change emissions, protect the environment, and improve the livelihoods of resource-dependent communities. From 2004-09 she was coordinating lead author for the International Assessment of Agricultural Science and Technology for Development, sub-Saharan Africa. She was on the UK Defra Economic Advisory Panel for five years; and in 2019-20, Specialist Advisor to the UK House of Lords Select Committee on Food, Poverty, Health, and Environment. From 2016-2024, she was Working Group 1 lead for the Lancet Countdown on Health and Climate Change, that addresses climate change impacts, exposures, and vulnerability. She is currently chair of the Economics Advisory Group for the Climate Change Committee's fourth climate change risk assessment, CCRA4.



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, published by Wharton School Press, is entitled *Making Money Moral: How a New Wave of Visionaries is Linking Purpose and Profit*.



Laurence Tubiana is CEO of the European Climate Foundation, Special Envoy for COP30 to Europe, and co-chair of the Global Solidarity Levies Task Force. A key architect of the Paris Agreement, she served as France's Climate Change Ambassador and Special Representative for COP21 and was later appointed UN High-Level Champion for climate action.

Laurence has worked at the intersection of climate, energy, and sustainable development for decades, engaging across government, academia, NGOs, and international institutions. She regularly contributes to international media including *Le Monde* and the *Financial Times*, and is in frequent dialogue with political leaders, academic peers, and civil society actors.

She previously advised French Prime Minister Lionel Jospin on environmental policy and created the Directorate for Global Public Goods at the Ministry of Foreign Affairs. From 2019 to 2020, she co-chaired the governance committee of France's Citizens' Climate Convention, helping ensure the independence and ambition of this participatory democratic initiative.

Laurence is the dean of the newly established Paris Climate School within Sciences Po and is currently a Professor of Democratic Studies at the École Normale Supérieure in Paris. She founded and directed the *Institut du Développement Durable et des Relations Internationales* (IDDRI) and has held senior academic roles in France and the US. She has received numerous national and international honours, including France's *Légion d'Honneur* in 2024.



Kevin Chika Urama is Vice President and Chief Economist for the Economic Governance & Knowledge Management Complex of the African Development Bank Group. He previously served at the Bank as a Senior Director for the African Development Institute and as Senior Advisor to the President of the African Development Bank Group on Inclusive and Green Growth Strategy, Policy Development, and Implementation.

A globally recognized development economist with more than 30 years of Africa-wide and global experience in economic policy and knowledge management, Professor Urama is an elected Fellow of the African Academy of Sciences (AAS); and a Distinguished Professor of the University of Nigeria Nsukka.

Before joining the African Development Bank Group, Prof. Urama served in various executive leadership positions in the academia, international organizations, and the private sector. He holds a PhD in Land Economy from the University of Cambridge, United Kingdom; an MPhil in Land Economy from Cambridge University; a Master of Science in Agricultural Economics from University of Nigeria, and a First-Class Honors bachelor's degree in Agricultural Economics from the University of Nigeria.



Vera Songwe is Chair and Founder of the Liquidity and Sustainability Facility. She is a senior nonresident fellow at the Brookings Institution with Global Economy and Development. Dr. Songwe is a global climate champion. She is the Co-Chair of the Independent High Level Expert Panel on Climate Finance, where she has supported the government of the UK and Egypt for COP27 and also for the Egypt and the UAE under COP28 alongside Lord Nick Stern. Under these COP presidencies they

authored the Songwe- Stern report on Climate finance as well the report on Accelerating implementation of Climate Finance. She co-chaired the Task Force Climate Independent Group of Experts on Climate Finance for the Brazilian G20. She also co-authored the report “Financing nature: a Transformative agenda” launched at COP28.

She is the former United Nations Under-Secretary General and the Executive Secretary of the Economic Commission for Africa (ECA). Previously, Songwe was the Regional Director of the International Finance Corporation, covering West and Central Africa. Prior to this, she held a number of roles at the World Bank, including serving as Country Director, Adviser to the Managing Director for Africa, Europe and Central and South Asia. She spent 10 years of her career working and living in Asia.

She holds a PhD in Mathematical Economics from the Center for Operations Research and Econometrics, a Master of Arts in Law and Economics and a Diplôme d'études approfondies in Economic Science and Politics from Université Catholique de Louvain in Belgium. She also was presented with an honorary Doctor of Laws degree in December of 2022 and holds a B.A. in Economics and Political science, both from the University of Michigan, Ann Arbor.



Stéphane Verguet is a core faculty member of Harvard University's Center for Health Decision Science and an Associate Professor of Global Health in the Department of Global Health and Population at the Harvard T.H. Chan School of Public Health. His research concerns health systems, health economics, and priority setting, with significant contributions toward incorporating dimensions of equity into the economic evaluation of health policies; and priority setting through the

modeling of health benefit packages and intersectoral interventions, via applied economic evaluations. He currently chairs the Analytics & Metrics Community of Practice of the Research Consortium for School Health & Nutrition since 2021 and has been contributing to the World Bank's *Disease Control Priorities* since 2009, most recently as a lead editor

for the Universal Health Coverage volume of its fourth edition. He was also a Commissioner of *The Lancet* Global Health 2050 Commission. Prof. Verguet has degrees from University of California, Berkeley and the École Polytechnique, and was previously on the faculty of the University of Washington.



Nick Watts is the Director of the Centre for Sustainable Medicine, leading NUS's efforts to accelerate the transition to net zero and resilient healthcare systems, across the world.

Prior to NUS, he worked as the Chief Sustainability Officer for the NHS where he spearheaded the national health system's efforts to deliver low-carbon healthcare across the country. He is a medical doctor, a Fellow of the Royal College of Physicians' Faculty of Public Health and has worked as the Executive Director of the Lancet Countdown, and the Global Climate and Health Alliance.



The “How” of Systems Transformation: Strategies and Levers for Health-Centered Climate Action – Part 1

Friday, July 25, 2025 | VIRTUAL

High-Level Summary Recap

On Friday, July 25, 2025, NAM’s kicked off Part 1 of its second information-gathering workshop, “The ‘How’ of Systems Transformation: Strategies & Levers for Health-Centered Climate Action.” The following offers a high-level summary of key insights and learnings to emerge from these sessions.

Speakers’ slides are available to view and download [here](#).

SESSION 1 | Framing the Levers of Transformation

This opening session introduced the NAM Commission’s emerging mental model, which outlines the working assumptions and core concepts guiding its work. The discussion underscored the importance of grounding the model in political, financial, and social realities, while ensuring its adaptability across diverse contexts.

Key Insights & Learnings:

- Health can help connect across sectors and resonate with policy makers and the public but centering it must avoid reinforcing silos. True transformation requires recognizing health not only as an outcome but as a shared value that can catalyze action across finance, environment, and other domains—while also acknowledging whose health is valued and how equity plays a role.
- Fragmentation of policy, governance, and budget structures impedes progress. Transformative solutions require integration across line items and ministries—not just cross-sector dialogue. Many governance systems lack formal mechanisms or mandates for intersectoral collaboration, making relationship-building and informal alliances essential enablers of systems change.
- Technical solutions and data alone are not enough. Institutional incentives, lack of time and resources for collaboration, and narrow job descriptions often prevent leaders from acting systemically. Enabling conditions—like time, trust, and mandate for cross-sector work—must be intentionally created and resourced.
- Transformative change entails visible trade-offs and potential winners and losers. Avoiding this reality weakens credibility. Systems thinking must account for political cycles, financing structures, and the

realities of who bears costs versus who reaps benefits—especially in lower-income and marginalized communities.

- There is no universal roadmap for systems change. Success depends on building relationships, fostering shared vision, and creating space for co-designed, locally relevant solutions. Investments in relational infrastructure—such as cross-sector convenings, frontline inclusion in design, and capacity for systems thinking—are foundational to durable progress.

SESSION 2 | Metrics that Move Systems

This session examined how metrics can function as levers to drive—not just describe—systems change, with a focus on health-centered climate action. Speakers explored detection and attribution science, global indicator frameworks, the integration of health into national policy processes, and the evaluation of climate actions' health co-benefits.

Key Insights & Learnings:

- Current climate-health metrics often focus on outcomes (e.g., mortality, disease incidence) but rarely measure *enabling conditions* or *system dynamics* that lead to transformational change. Process and intermediate indicators—tracking governance, finance, and institutional capacity—are essential for motivating and sustaining action.
- Advances in detection and attribution science now allow quantification of health impacts (e.g., heat-related mortality, dengue outbreaks) directly attributable to climate change. These quantified impacts have strengthened legal cases, informed national policy debates, and reframed climate change as a *current* public health mandate rather than a distant risk.
- Multiple overlapping indicator frameworks exist (e.g., Lancet Countdown, Global Goal on Adaptation, WHO programs, NDCs, national observatories), but lack of harmonization risks burdening countries and undermining credibility. Alignment and standardization—especially linking climate-health indicators to existing SDG targets—can streamline measurement while supporting national implementation.
- Metrics are more likely to drive change when they are embedded in key decision systems (e.g., budgeting, policy frameworks, regulatory standards, and investment decisions) and are contextualized for national and subnational priorities. This includes making the *economic*, *development*, and *policy* cases for health-centered climate action.
- Rigorous evaluation of implemented policies (beyond modeled estimates) is essential to confirm health benefits, surface unintended consequences, and guide mid-course adjustments. Innovative mixed-methods approaches (e.g., RCTs where feasible, contribution analysis, interrupted time series) and equity-focused metrics can capture real-world impacts more effectively.
- Process indicators that capture inclusivity, governance quality, and participation of marginalized and Indigenous groups are vital. Metrics should reflect not only *what* is measured but *how* measurement is designed, ensuring equity and values raised during Session 1 are embedded in indicator frameworks.

SESSION 3 | Shifting Systems Through Culture, Narrative & Behavior

This session explored how cultural, narrative, and behavioral strategies can drive large-scale systems change—drawing lessons from landmark efforts in tobacco control and sanitation reform and unpacking how those insights can be applied to the climate and health agenda. The discussion emphasized the need to move beyond surface-level behavior change tactics toward deeper shifts in values, norms, and power structures.

Key Insights & Learnings:

- Successful large-scale movements—such as global tobacco control—paired powerful narratives with policy action, reframing harmful industries as accountable actors and galvanizing collective pressure for change. Climate-health narratives must similarly move beyond individual responsibility toward confronting systemic drivers like fossil fuel dependence and policy inaction.
- Health professionals, community leaders, and coalitions that bridge health, environmental justice, and policy networks have proven effective in shifting both norms and policies. The health sector’s trusted standing offers a powerful platform for reframing climate action as a public health imperative.
- In tobacco control, reframing smokers as “victims” and the tobacco industry as the “villain” helped build broad-based momentum. In the climate-health context, identifying and naming structural forces—such as entrenched fossil fuel interests—while mobilizing collective agency can create a similarly powerful dynamic.
- As seen in India’s sanitation efforts, ignoring entrenched social hierarchies or failing to address structural barriers can undermine uptake and reinforce inequities. Climate-health strategies must be grounded in cultural realities and aligned with the lived experience and values of the communities they aim to reach.
- While behavioral interventions have often targeted personal habits, the same tools (e.g., framing, social modeling, norm activation) can be applied to influence institutions, policies, and market behavior. This shift from micro- to macro-level application is critical to avoid reinforcing individual-blame narratives (e.g., BP’s carbon footprint calculator).
- Framing climate action around tangible, near-term health benefits (e.g., cleaner air, safer housing, and healthier communities) can make the transition more relatable and politically durable. Success is more persuasive when tied to improved well-being, resilience, and equity, rather than abstract climate targets.



Part 1 Materials



TRANSFORMING SYSTEMS FOR CLIMATE & HEALTH

WORKSHOP SERIES

NATIONAL ACADEMY OF MEDICINE

The "What" of Systems Transformation: Anchoring Health in Climate Action

TUESDAY – WEDNESDAY, APRIL 29 – 30, 2025 | VIRTUAL

Key Themes and Takeaways

*This workshop marked the launch of the Commission's collective inquiry into how to advance health-centered climate action at the systems level. Through expert presentations, thematic discussions, and cross-sector exchange, **5 central themes** emerged. These takeaways are offered not as conclusions, but as inputs to support an evolving dialogue and deeper deliberation among the Commission.*

All workshop materials—including the recording and speakers' slides—are available on the [NAM website](#).

1. Systems Change

Across the sessions, participants emphasized that today's challenges—intersecting climate, health, and equity crises—cannot be addressed through incremental or siloed approaches. Existing systems are designed around short-term, GDP-driven growth and often perpetuate harm. Systems thinking offers a lens to recognize interdependencies, disrupt path dependencies, and create space for new models grounded in human and planetary well-being.

Key Takeaways for the Commission's Deliberation:

- **Create the conditions for new systems to emerge.** Existing systems are constrained by path dependency and short-termism. Building toward healthier futures requires the creation of new feedback loops and incentive structures that reinforce climate-health co-benefits and make transformational shifts “stick” over time (S1, Levin; S3, Dixon-Declève).
- **Apply systems thinking to policy design.** Policy- and decision-makers must consider how interventions cascade across domains—health, environment, equity, economy. A systems-oriented lens can expand both the problem definitions and the solution space (S3, Dixon-Declève).
- **Redefine health to reflect integrated social and ecological well-being.** Prevailing biomedical definitions often fail to reflect how health is shaped by social and ecological systems. Alternative paradigms—such as care societies and well-being economies—embed health more fully into social, economic, and environmental systems (S4, Chandra & Kelleher).

2. Narrative & Strategic Frames

Narratives shape what societies value, what policy options are seen as legitimate, and who holds power. Throughout the workshop, speakers highlighted the need to reframe climate-health action in ways that resonate with different audiences, challenge dominant economic paradigms, and promote hope, justice, and shared prosperity.

Key Takeaways for the Commission's Deliberation:

- **Tailor entry points to fit audience context.** While powerful in many contexts, health may not always be the most motivating or relevant frame. Other narratives—centered on opportunity, rights, productivity, or resilience—may be more effective for engaging different sectors or political audiences (S2, Adler; S3, Dixon-Declève; S4, Chandra).
- **Use values-based framing to broaden coalitions.** Pairing rights-based arguments (e.g., the right to a healthy environment) with co-benefits-oriented narratives can help overcome resistance, mobilize broader coalitions, and sustain momentum (S1, Campbell-Lendrum; S2, Replogle; S3, Rabie)
- **Reframe progress beyond short-term GDP growth.** Moving beyond GDP as a sole measure of success is essential to aligning economic systems with health and climate goals. Framing well-being, equity, and sustainability as drivers of progress can legitimize alternative models of development (S3, Dixon-Declève; S4, Chandra).

3. Metrics & Incentives

The systems we build and sustain are deeply influenced by what we measure and reward. Speakers emphasized that prevailing metrics often obscure health-climate connections, while many incentives continue to entrench harmful practices and investments.

Key Takeaways for the Commission's Deliberation:

- **Illuminate the health impacts of climate (in)action.** Strengthening the attribution of health outcomes to climate-related exposures—such as through improved mortality records or co-morbidity tracking—can clarify risk, strengthen accountability, and support integrated policymaking (S2, Nemukula).
- **Redirect incentives toward desired climate-health outcomes.** Redirecting public and private incentives—from fossil fuel subsidies to regulatory frameworks—can unlock new forms of value creation, investment, and innovation aligned with climate-health outcomes (S2, Adib).
- **Measure what matters for long-term, equitable outcomes.** Shifting from narrow economic indicators to metrics that reflect equity, well-being, and ecological and social resilience is essential to guiding long-term, systems-aligned decision-making toward health for all at net-zero.

4. Cross-Sector & Multilevel Collaboration

Discussion affirmed that systems transformation cannot occur in isolation. Achieving alignment across health, environment, energy, agriculture, finance, and other sectors—and across governance levels—requires intentional coordination. Institutional siloes, mismatched mandates, and fragmented data systems pose challenges, but shared goals and targeted governance reforms offer promising pathways.

Key Takeaways for the Commission's Deliberation:

- **Identify and act on points of convergence.** Identifying shared outcomes of interest, overlapping mandates, and opportunities for resource pooling can reduce friction, strengthen coherence, and multiply impact (S3, Kumar).
- **Empower local actors as drivers of change.** Sub-national actors and community-based organizations often have the clearest view of lived realities and the agility to tailor interventions. Empowering them with tools, authority, and resources is key to achieving and sustaining systems transformation (S3, Kumar; S4, Murabit; S4, Chandra).
- **Institutionalize coordination through governance structures.** Institutional alignment cannot be left to chance. Formal governance mechanisms, shared metrics, and cross-sector platforms are needed to enable collaboration across scales and sectors, particularly between public and private sector actors (S3 Discussion; S4, Chandra).

5. Implementation Pathways

The gap between vision and execution remains a central challenge. Participants repeatedly cited barriers such as limited financing, institutional inertia, and weak accountability. Addressing these barriers requires not only resource mobilization but also design for delivery—ensuring the systems that support implementation are as robust as the strategies themselves.

Key Takeaways for the Commission’s Deliberation:

- **Make the cost of inaction visible.** Articulating the long-term human and economic consequences of climate inaction—including the hidden externalities often excluded from traditional cost-benefit analyses—can help reframe climate-health investment as a necessity rather than a trade-off (S3, Nemukula; S3, Saberi; S4, Chandra).
- **Leverage public-private and community partnerships.** The private sector can pilot innovations that governments scale, while community organizations can ensure solutions are grounded in lived realities. Together, these actors expand reach, enhance relevance, and enable more adaptive implementation (S4, Murabit & Chandra).
- **Design systems that support service delivery.** Ambitious goals must be matched with implementation mechanisms (i.e., financial pathways, institutional capabilities, accountability frameworks) that can translate intent into sustained action.



NATIONAL ACADEMY OF MEDICINE

Initiative on Transforming Systems for Climate & Health

CORE CONCEPTS & WORKING DEFINITIONS

Below we introduce a set of core concepts and working definitions that are guiding the Commission's efforts to catalyze systems change at the climate-health nexus. While these definitions are intended to evolve with new insights and perspectives, they offer a shared language to support coherence across the workshop discussions.

Co-Benefits: The positive effects that arise when a policy or action designed to achieve one objective—such as reducing greenhouse gas emissions—simultaneously advances other goals, such as improving health, equity, or economic resilience. Recognizing and maximizing co-benefits is central to designing integrated strategies that align climate and health priorities.

Equity: A systemic approach to fairness that acknowledges how institutions, policies, and economic models have produced unequal health and climate outcomes. Equity in this context requires transforming these systems to redistribute power, mitigate harm, and ensure that no group bears an unfair share of risk or is excluded from the benefits of a healthier, more sustainable future.

Health: A state of physical, mental, and social well-being that depends on equitable access to the resources and conditions people need to thrive: clean air and water, nutritious food, safe housing, a stable climate, dignified work, and supportive communities. In this context, health is both a core outcome and a strategic driver of systems change—a clear signal of whether energy, food, urban, financial, and governance systems are delivering sustainable, resilient, and just benefits for people and planet.

Health-Centered Climate Action: An approach to climate mitigation and adaptation that explicitly prioritizes human health, well-being, and equity as core outcomes—and as drivers—of systems change across sectors and systems. By placing health at the center, this approach can unlock broader political, economic, and social support for transformative action.

Levers: Strategic points of influence within or across systems that can be used to drive meaningful, large-scale change. In this context, levers include structural mechanisms such as policy, finance, governance, and culture that shape decisions and behaviors across multiple sectors and systems.

Sectors: Distinct domains of economic and social activity—such as energy, transportation, food and agriculture, finance, and urban planning—that significantly

influence both emissions and health outcomes. Because most health-shaping decisions are made in these sectors rather than in the health system itself, cross-sectoral engagement and alignment are critical to enabling effective and scalable interventions.

Systems: Interconnected sets of actors, institutions, infrastructure, behaviors, and rules that produce outcomes over time. In the climate–health context, systems include the food system, energy system, transportation system, health system, and economic system. These systems are dynamic and complex, shaped by feedback loops and underlying power structures. Lasting change requires shifting how these systems operate—not just what they produce.

Systems Transformation: A fundamental reconfiguration of how interconnected systems—such as energy, food, finance, health, and governance—are structured, governed, and resourced, as well as how they interact. Systems transformation aims to produce more equitable, sustainable, and resilient outcomes over time by shifting not only outputs, but also the deeper rules, norms, and power dynamics that drive them.



NATIONAL ACADEMY OF MEDICINE

Initiative on Transforming Systems for Climate & Health

SUBMITTED MATERIALS

The following materials have been submitted to the Commission for their review and consideration ahead of, The “How” of Systems Transformation: Strategies and Levers for Health-Centered Climate Action – Parts 2-3.

PDFs are available to view and download [here](#).

-
1. Africa CDC. July 2025. Climate Change and Health: Strategic Framework. <https://africacdc.org/download/climate-change-and-health-strategic-framework-2025/>
 2. Alam AR. Can The Courts Save Us from the War We’ve Waged Against Our Own Planet? January 17, 2025. <https://www.dawn.com/news/1875358>.
 3. Ravelo JL. New ADB Platform Aims to Help End Malaria, TB, and Dengue in Asia-Pacific. July 15, 2025. <https://www.devex.com/news/new-adb-platform-aims-to-help-end-malaria-tb-and-dengue-in-asia-pacific-110492>.
 4. Tubiana L and Toni A. The Case for a Global Climate Assembly. September 23, 2024. <https://www.project-syndicate.org/commentary/global-climate-citizens-assembly-cop30-by-laurence-tubiana-and-ana-toni-2024-09>