

Collecting GHG Emissions Data: Current Capabilities and Challenges

Leveraging AI for Greenhouse Gas Monitoring Webinar Series



Greenhouse gas (GHG) emissions information can be used to measure, allocate, and reduce emissions across many sectors. By gathering accurate and efficient data on GHG emissions, we can gain important insights on reducing these emissions that contribute to climate change and monitor the impact of mitigation policies on the level of carbon in the atmosphere. This webinar will feature two technical presentations from Shelia Miller (University of Michigan) and Karthik Ramanna (University of Oxford) defining the core concepts of GHG emissions information and current and future use cases for GHG emissions information. A discussion, moderated by Alicia Seiger (Chan Zuckerberg Initiative), will focus on the opportunities and challenges associated with integrating artificial intelligence into GHG emissions information-gathering processes. A Q&A session with the audience will follow.

Join the livestream at [this link](#) and submit your questions and comments using [this link](#). Speaker biographies can be found below the agenda.

This is the first of a 3-part educational webinar series, “Leveraging AI for Greenhouse Gas Monitoring”, which has a goal of outlining how AI can be leveraged to enhance the accuracy and accessibility of GHG emissions monitoring. This webinar series is an activity of the National Academies Roundtable on Artificial Intelligence & Climate Change. The Roundtable seeks to foster ongoing discussions, shared learning, and nimble coordination around emerging issues related to AI and climate change, including: how AI can combat climate change; the environmental impact of AI itself; and strategies for mitigating the impacts of AI energy consumption and climate effects. See the Roundtable’s Statement of Task [here](#).

WEDNESDAY, NOVEMBER 19, 2025

2:00 PM (ET)¹ Welcome

Kasia Kornecki, National Academies Roundtable on Artificial Intelligence and Climate Change Director

¹ All time in Eastern

Collecting GHG Emissions Data: Current Capabilities and Challenges

Leveraging AI for Greenhouse Gas Monitoring Webinar Series – Webinar 1

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|----------------|---|
| 2:05 PM | Technical Presentation: Collecting GHG Emissions Data – Past, Present, and Future
Shelie Miller, University of Michigan |
| 2:20 PM | Technical Talk: Rigorous emissions accounting to drive competitive decarbonization
Karthik Ramanna, University of Oxford |
| 2:35 PM | Discussion
Moderator: Alicia Seiger, Chan Zuckerberg Initiative, National Academies
Roundtable on Artificial Intelligence and Climate Change Ex Officio Member |
| 2:50 PM | Audience Q&A |
| 3:00 PM | ADJOURN |

Speaker Biographies

Alicia Seiger, Chan Zuckerberg Initiative, National Academies AI & Climate Roundtable Ex Officio Member

Alicia Seiger is an expert in climate-related market innovation and development. She is the Director of Climate at the Chan Zuckerberg Initiative (CZI) and a Visiting Scholar at Stanford Doerr School of Sustainability (SDSS). Prior to joining CZI, Alicia was a lecturer at Stanford Law School and led climate and energy finance initiatives at Stanford Law, Graduate School of Business, and SDSS. Alicia has been at the forefront of technology and climate for three decades. A native of Silicon Valley, she began her career pioneering the web advertising industry. She has been innovating climate solutions at the intersections of technology, policy and finance since 2005. Her first book, "Settling Climate Accounts: Navigating the Road to Net Zero" examines the rough edges of net zero in practice and makes recommendations for the road ahead. Alicia has served as an advisor to state Governors and pension funds on data sources, tools and frameworks for managing climate risk and opportunity. She is a member of the editorial board of the Oxford Open Climate Change Journal. Alicia holds a B.A. from Duke University in a self-designed curriculum focused on environmental science and policy and cultural anthropology, and an M.B.A. from the Stanford Graduate School of Business.

Shelie Miller, University of Michigan

Shelie Miller is the Jonathan W. Bulkley Collegiate Professor in Sustainable Systems at the School for Environment and Sustainability at the University of Michigan. She currently serves as co-director of the Center for Sustainable Systems. Miller's research focuses on quantifying the environmental impacts of new products and technology using life cycle assessment and other sustainable systems tools. She engages in a variety of science communication efforts, helping translate sustainability research and challenge common misperceptions to improve environmental decision-making.

Dr. Miller was awarded a Presidential Early Career Award in Science and Engineering (PECASE) by President Obama and received a National Academies' Jefferson Science Fellowship to focus on science policy issues. Her research and commentary have been featured by various media outlets, including The New York Times, The Washington Post, NPR, BBC, Forbes, and Consumer Reports.

Karthik Ramanna, University of Oxford

Karthik Ramanna is Professor of Business and Public Policy at the University of Oxford's Blavatnik School of Government and a fellow at [St John's College](#). He teaches at the Blavatnik School on managing organizations in polarized times, which led to his 2024 book [The Age of Outrage](#). An expert on business-government relations, sustainable capitalism, and corporate reporting and auditing, Professor Ramanna studies how organizations and leaders build trust with stakeholders. His scholarship has won numerous awards, including the *Journal of Accounting and Economics* Best Paper Prize, the Harvard Business Review McKinsey Award for "groundbreaking management thinking," and three times the international Case Centre's prizes for "outstanding case-writing," dubbed by the *Financial Times* as "the business school Oscars."

Professor Ramanna established the [Case Centre on Public Leadership](#) and the [Transformational Leadership Fellowship](#) at the School, the latter a bespoke, by-invitation program for senior leaders looking to reimagine their public-service impact. In 2022, he co-founded the non-profit [E-ledgers Institute](#), where he serves as principal investigator, with a mission to drive decarbonization processes through rigorous GHG accounting. From 2016 to 2023, he was director of the Blavatnik School's [Master of Public Policy](#) program that has educated over a thousand public leaders from about 120 countries. From July 2023 to April 2025, Professor Ramanna was on partial public-service leave from Oxford to advise the US Public Company Accounting Oversight Board, an "auditor of auditors" in global markets.