NATIONAL ACADEMIES Sciences Engineering Medicine

NATIONAL ACADEMIES ROUNDTABLE ON ARTIFICIAL INTELLIGENCE & CLIMATE CHANGE

Bridging Science and Accounting: AI for Carbon Dioxide Removal & Carbon Markets

Leveraging AI for Greenhouse Gas Monitoring & Accountability Webinar Series

Scaling carbon dioxide removal (CDR) requires not just scientific advances, but credible, high-integrity markets. Yet persistent gaps between how carbon is measured in the real world and how it is accounted for in carbon markets continue to limit trust, investment, and deployment. Technical presentations from **Alicia Karspeck** ([C]Worthy) and **Julio Friedmann** (Carbon Direct) will examine how AI can strengthen monitoring, reporting, and verification across land-based, marine, and engineered pathways. A discussion will also address the economic and governance challenges shaping CDR markets. A Q&A session with the audience will follow. Join the livestream at this link and submit your questions and comments using this link.

TUESDAY, JUNE 2, 2026

3:00 PM (ET)[1] **Welcome**
Kasia Kornecki, National Academies Roundtable on Artificial Intelligence and Climate Change Director

3:05 PM **Opening Remarks**
Moderator: Jonathan Overpeck, University of Michigan

Presenters:
- Alicia Karspeck, [C]Worthy
- Julio Friedmann, Carbon Direct

3:20 PM **Discussion**

4:00 PM **ADJOURN**

[1] All time in Eastern

This is the conclusion of a 3-part educational webinar series, "Leveraging AI for Greenhouse Gas Monitoring & Accountability", 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, which seeks to foster ongoing discussions, shared learning, and nimble coordination around emerging issues related to AI and climate change.

Speaker Biographies

Jonathan Overpeck, University of Michigan
Professor Jonathan Overpeck is an interdisciplinary climate scientist and the Samuel A. Graham Dean of the School for Environment and Sustainability at the University of Michigan. He has a Ph.D. and master's degree from Brown University and a bachelor's degree from Hamilton College. He has written over 230 published works that have been cited over 60,000 times, including serving as a Coordinating Lead Author for the Nobel Prize winning Intergovernmental Panel on Climate Change (IPCC) 4th Assessment (2007). Other awards include the US Dept. of Commerce Gold Medal, a Guggenheim Fellowship, the Walter Orr Roberts award of the American Meteorological Society, and the Quivira Coalition's Radical Center Award. Overpeck has led two major programs focused on regional climate adaptation and serves on the State of Michigan Governor's Council on Climate Solutions, as well as the City of Ann Arbor, Michigan's Energy Commission. He has appeared and testified before Congress multiple times, is a Fellow of the American Geophysical Union (AGU) and the American Association for the Advancement of Science and is a member of the U.S. National Academy of Sciences.

Julio Friedmann, Carbon Direct
Dr. Julio Friedmann is Chief Scientist at Carbon Direct. He works directly with clients, the Science team, and the leadership of Carbon Direct to solve major technical challenges around carbon management and CO2 removal. Dr. Friedmann recently served as Principal Deputy Assistant Secretary for the Office of Fossil Energy at the Department of Energy where he was responsible for DOE's R&D program in advanced fossil energy systems, carbon capture, and storage (CCS), CO2 utilization, and clean coal deployment. More recently, he was a Senior Research Scholar at the Center on Global Energy Policy at Columbia. He has held positions at Lawrence Livermore National Laboratory, including Chief Energy Technologist. Dr. Friedmann is one of the most widely known and authoritative experts in the U.S. on carbon removal (CO2 drawdown from the air and oceans), CO2 conversion and use (carbon-to-value), hydrogen, industrial decarbonization, and carbon capture and sequestration.

Alicia Karspeck, [C]Worthy
Dr. Alicia Karspeck is co-Founder and Chief Technology Officer at [C]Worthy, a non-profit research organization developing open-source software to model ocean-based carbon dioxide removal. She has had a varied and cross-sector career — previously leading teams and initiatives in industry, research, and non-profits and co-founder an influenza prediction consulting firm. She spent her scientific career at the National Center for Atmospheric Research, working for over a decade on seasonal-to-decadal climate prediction and leading the development of the global coupled data assimilation system for the Community Earth System Model (CESM). Dr. Karspeck is currently the chair of the NOAA Climate Working Group and has participated in numerous national scientific committees and advisory panels including expert reviews of the NOAA Environmental Modeling Center, the U.S. operational weather and climate modeling strategy, and the Naval Research Laboratory Marine Meteorology Division. She has also sat on several scientific advisory boards for commercial and non-profit organizations. She holds bachelors and masters degrees in Mechanical Engineering, and a Ph.D. in Climate Science and Oceanography from Columbia University. She frequently speaks on data and modeling tools for marine CDR and other physical-climate related applications.