

Yale Center for Natural Carbon Capture

2024 Spring Symposium

on

Marine Carbon Dioxide Removal

April 25 - 26, 2024

Kline Geology Laboratory

210 Whitney Ave, New Haven, CT

Thursday, April 25, 2024

3:30 – 3:55 **Coffee and Registration**

3:55 - 4:00 **Welcome and Intro**

Prof. Liza Comita and Prof. David Bercovici, YCNCC Co-Directors

Prof. Matthew Eisaman, Symposium Organizer

4:00 – 4:30 **Keynote address: mCDR – the view from NOAA**

Dr. Sarah Kapnick, Chief Scientist for NOAA

4:30 – 4:50 **Invited talk: Energy and Innovation: mCDR at DOE and PNNL**

Dr. Jessica Cross, Earth Scientist at Pacific Northwest National Lab (PNNL)

4:50 – 5:10 **Invited talk: The Evolving Legal Landscape for mCDR**

Romany Webb, Deputy Director at Sabin Center for Climate Change Law at Columbia University

5:10– 5:30 **Invited talk: MRV for mCDR – Current status and future goals**

Dr. Matt Long, Co-Founder and CEO of [C]Worthy

5:30 – 7:30 **Reception**

Friday, April 26, 2024

8:30 – 9:00 **Breakfast and Registration**

9:00 - 9:45 **Panel: Monitoring, Reporting, and Verification – Challenges and Opportunities**

Dr. Alicia Karspeck, [C]Worthy (moderator); Prof. David Ho, [C]Worthy; Anu Kahn, Carbon180; Anna Madlener, Carbon to Sea Initiative; Dr. Jenny Mills, Cascade Climate.

9:45 - 10:45 **Ten-Minute Talks: mCDR research highlights and recent policy developments**

1. Isometric's MRV protocol for OAE

Dr. Jennifer Yin, Isometric

2. Impulse response functions as a framework for quantifying carbon uptake associated with ocean alkalinity enhancement.

Dr. Elizabeth Yankovsky, [C]Worthy and Yale University

3. Mapping the global variation of OAE efficiency for CDR

Mengyang Zhao, University of Connecticut

4. OAE simulation: Model uncertainties and atmosphere feedback effects

Dr. Michael Tyka, Google

5. The additionality problem of OAE

Prof. Lennart Bach, University of Tasmania

6. The U.S. Government's Fast Track Action Committee for Marine CDR

Dr. Greg Frost, NOAA

10:45 - 11:05 **Coffee break**

11:05 – 11:45 **Panel: The State of mCDR Carbon Removal Purchases and Investment**

Toby Bryce, The OpenAir Collective (moderator); Katie Sierks, Microsoft; Joanna Klitzke, Stripe; Rory Jacobson, DOE; Dr. Marc von Keitz, The Grantham Foundation for the Protection of the Environment; Reece Pacheco, Propeller VC.

11:45 – 1:00 **Lunch**

1:00 – 2:40. **Ten-minute Talks: Recent progress in mCDR Deployment and Commercialization**

1. Banyu Carbon: Carbon Removal Powered by Sunlight and Seawater

Prof. Alex Gagnon, Banyu Carbon

2. The Accelerated Weathering of Limestone on Ships

Prof. Jess Adkins, Calcareo

3. Accelerating the responsible development of OAE technologies through non-profit science

Dr. Grace Andrews, Hourglass Climate

4. Emerging sensing and instrumentation technology for MRV in support of mCDR commercialization

Dr. Ellen Briggs, Aquatic Labs

5. Planetary's OAE Deployment in Nova Scotia: Past, present, and future

Dr. Will Burt, Planetary Technologies

6. Progress in developing direct ocean capture technology for marine carbon dioxide removal.

Dr. Sophie Chu, Captura

7. Equatic-1: Pioneering the Future of Carbon Removal and Carbon-Negative Hydrogen Production at Scale

Prof. Erika La Plante, Equatic

8. Developing an Operational Solution for MRV

Prof. Thomas Peacock, atdepth MRV

9. Laboratory and field MRV development to support OAE pilot trials

Dr. Mallory Ringham, Ebb Carbon

10. Learnings from early explorations into mCDR commercialization

Brad Rochlin, Running Tide

2:40 – 3:00 **Coffee break**

3:00 – 3:45 **Panel: Responsible deployment of mCDR - Managing the tension between caution and urgency.**

Dr. Gabby Kitch, NOAA (moderator); Dr. Rudy Kahsar, Rocky Mountain Institute; Dr. Sifang Chen Carbon180; Brad Ack, Ocean Visions; Freya Chay, CarbonPlan.

3:45 – 4:30 **Panel: Policy, regulation, and standards**

Hara Wang, Cascade Climate (moderator); Romany Webb, Columbia University; Anu Kahn, Carbon 180; Dr. Wil Burns, American University and Northwestern University.