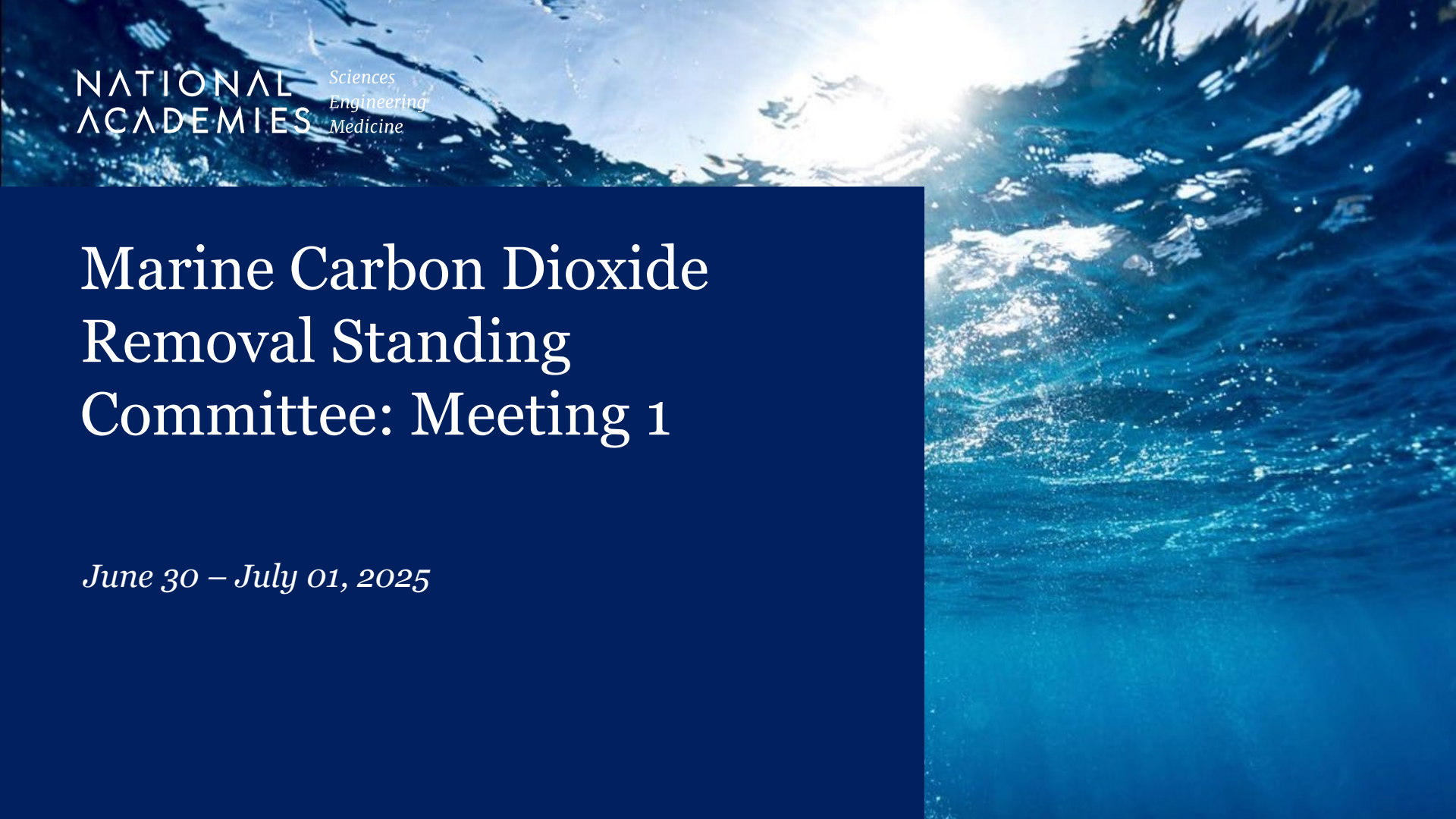

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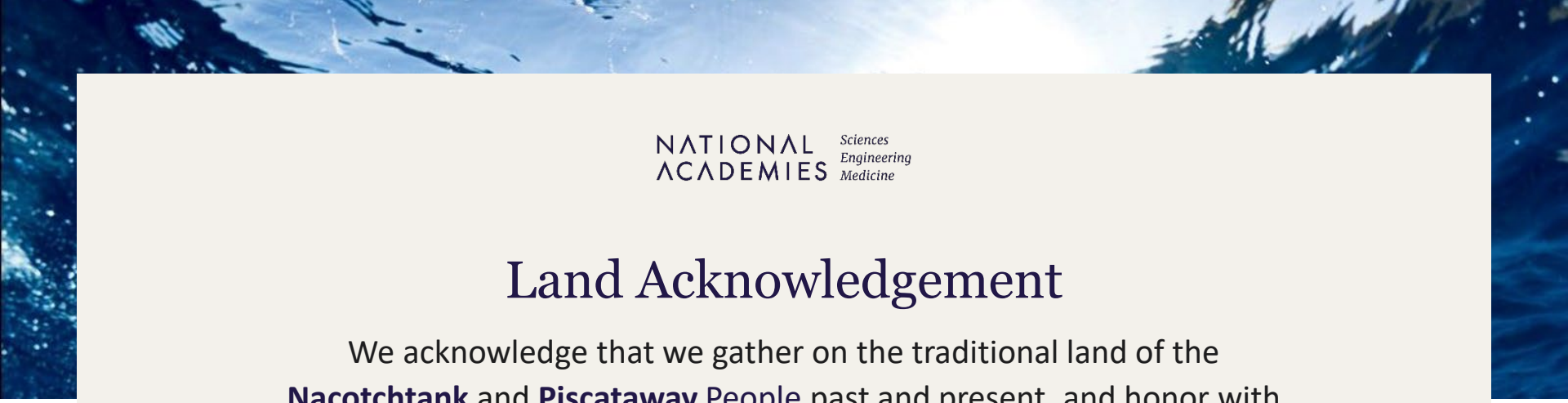
Marine Carbon Dioxide Removal Standing Committee: Meeting 1

June 30 – July 01, 2025



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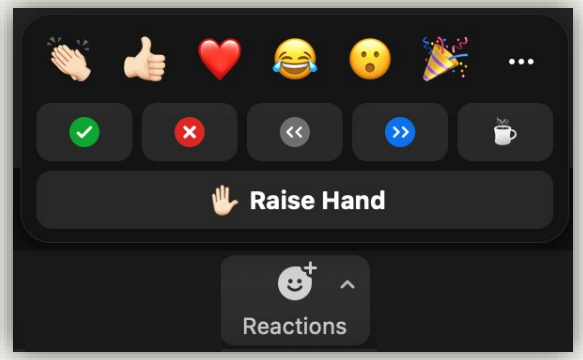
Land Acknowledgement

We acknowledge that we gather on the traditional land of the **Nacotchtank** and **Piscataway** People past and present, and honor with gratitude the land itself and the people who have stewarded it throughout the generations. We honor and respect the enduring relationship that exists between these peoples and nations and this land. We thank them for their resilience in protecting this land; and aspire to uphold our responsibilities to their example.

Participating in today's meeting

1. The National Academies of Sciences, Engineering, and Medicine (NASEM) are committed to the principles of diversity, integrity, civility, and respect in all our activities. We look to you to be a partner in this commitment by helping us to maintain a professional and cordial environment.
2. All forms of discrimination, harassment, and bullying are prohibited in any NASEM activity.
3. Please introduce yourself the first time you talk with name and affiliation
4. Mute yourself when not speaking to support a distraction-free discussion space
5. Use either the Slido or raise hand feature for comments and questions
6. During discussion, please turn your camera on to support a sense of community



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Slido

Please submit your questions via slido.com #mcdrmeeting1

SCAN WITH YOUR PHONE

Agenda

The Marine Carbon Dioxide Removal Standing Committee will hold a virtual open session during the first meeting from 12:00 to 2:00 PM ET on June 30, 2025, to introduce the study to the public and to discuss the study task with the study sponsor, Carbon to Sea Initiative.

12:00 PM	Welcome and Opening Remarks
	Project Context
	Statement of Task
	Project Timeline
	Consensus Committee Process
1:00 PM	Meet with Sponsor
	Closing Remarks

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Who We Are

The National Academy of Sciences, Engineering, and Medicine is a non-governmental, non-profit organization chartered by the US Congress in 1863 at the request of President Lincoln. We provide independent, objective advice to inform policy with evidence, spark progress and innovation, and confront challenging issues for the benefit of society.

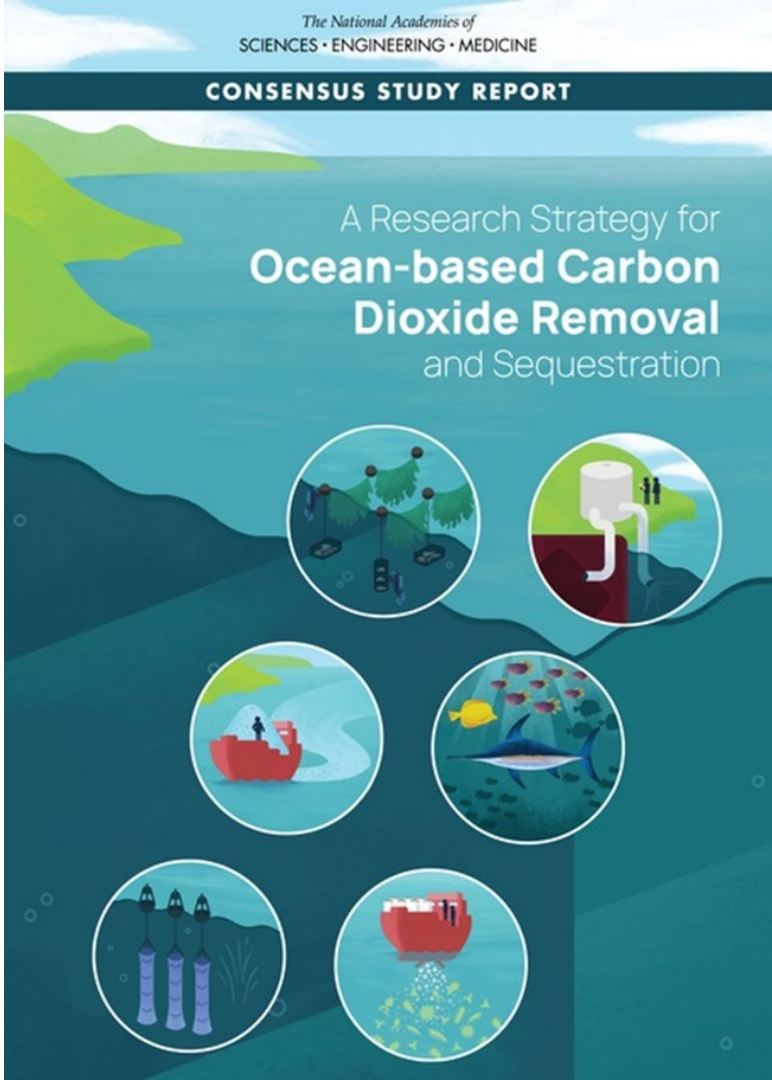
What We Do

We marshal knowledge and expertise across disciplines to study complex and sometimes contentious issues, reach consensus based on the evidence, and identify the best path forward.

Learn more at **nationalacademies.org/about**

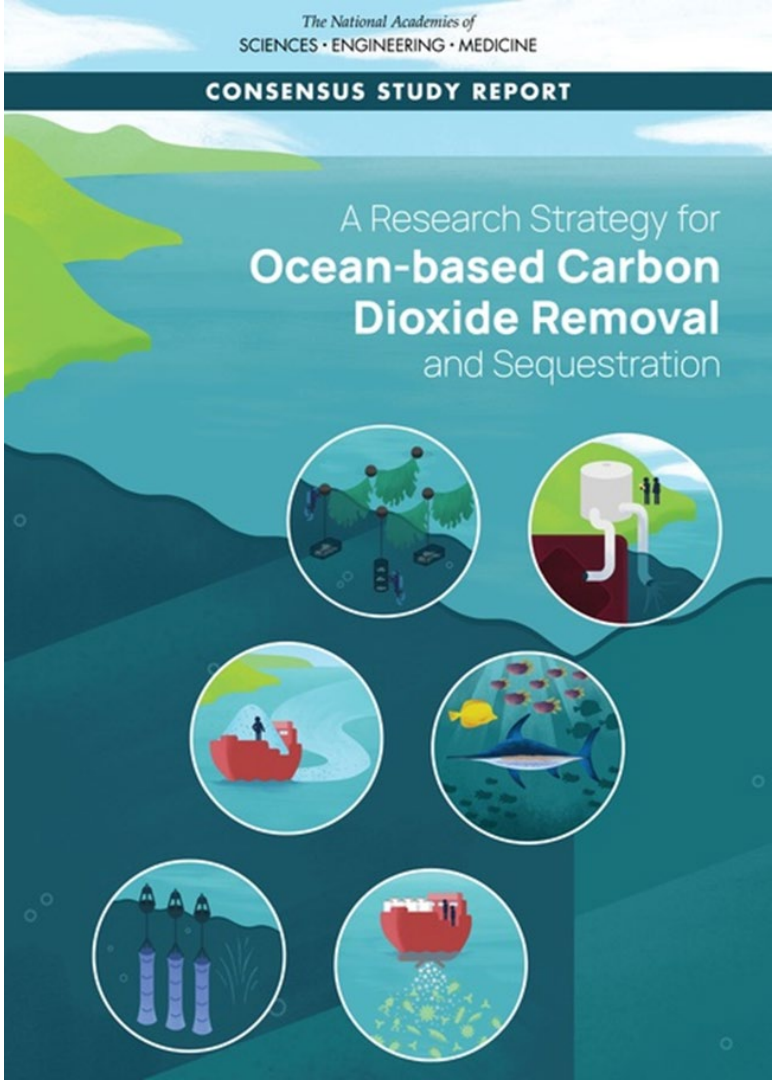
Context

- 2022 Release (work completed in 2021)
- Sponsor: ClimateWorks Foundation
- >17,000 downloads
- New funding opportunities
- Exponential growth in the field
- What can we do to keep this resource relevant, trusted, and of value?
- What can we do to respond nimbly and timely to emerging needs of the mCDR community?



Project Overview

- Standing Committee formed to keep the content current and relevant
- 3-year project term with opportunity to renew
- Initial sponsor: Carbon to Sea Initiative
- Committee will meet quarterly
- All updates will be peer reviewed and published digitally
- First update release set for early 2026



Statement of Task

A standing committee of the National Academies of Sciences, Engineering, and Medicine will address the following needs of the marine carbon dioxide removal (mCDR) community:

Creation of a digital, online version of the National Academies' 2022 **report**, A Research Strategy for Ocean-Based Carbon Dioxide Removal that can be revised and published with peer-reviewed updates as warranted to ensure that the 2022 report remains relevant and serves as a trusted, vetted, and transparent resource for the wide range of stakeholders comprising the mCDR community. Updates could include:

1. Inclusion of an annual or semi-annual "**state of the science, technology, and research**" update, summarizing the landscape of the rapidly advancing field of mCDR.

2. **Updates of fundamental understanding** and specific **research and development needs** of any marine CDR approach. This would include updating independent modules of the report and updating the summary tables of **feasibility** for the various marine CDR approaches as new information on potential, scalability, environmental impacts, cost, and other factors becomes available.

3. Updates **of overarching research and development needs** of cross-cutting mCDR research (not approach-specific) such as legal and regulatory issues, social dimensions and environmental justice considerations, and monitoring, reporting, and verification. This could include additions such as consensus on a code of conduct for conducting mCDR research in a responsible and transparent manner or specific recommendations for monitoring, reporting, and verification (MRV) of atmospheric carbon dioxide removed (including data transparency), and prioritization of mCDR approaches.

4. **Additional information not fully covered** in the original report, such as the consideration of environmental impacts on deep-sea ecosystems, assessment of new or co-located approaches, or ad hoc peer review of reports or projects completed outside the National Academies.

Initiation of new studies or **new components** to the digital mCDR report

Committee Membership (provisional)

Scott Doney, *Chair*, University of Virginia

Miranda Boettcher, German Institute for International & Security Affairs

Jessica Cross, Pacific Northwest National Laboratory

Jay Cullen, University of Victoria

Mahmud Farooque, Arizona State University

Elizabeth Jewett, NOAA Fisheries (retired)

David Karl, University of Hawaii, Manoa

Gabby Kitch, NOAA (former)

Kristen Kleisner, Environmental Defense Fund

Lisa Levin, Scripps Institution of Oceanography

Galen McKinley, Columbia University

Helene Muri, Norwegian University of Science and Technology

Phil Renforth, Heriot-Watt University

Terre Satterfield, University of British Columbia

David Siegel, University of California, Santa Barbara

Udayan Singh, Argonne National Laboratory

Adam Subhas, Woods Hole Oceanographic Institution

Romany Webb, Columbia University

Heather Willauer, US Naval Research Laboratory

Staff

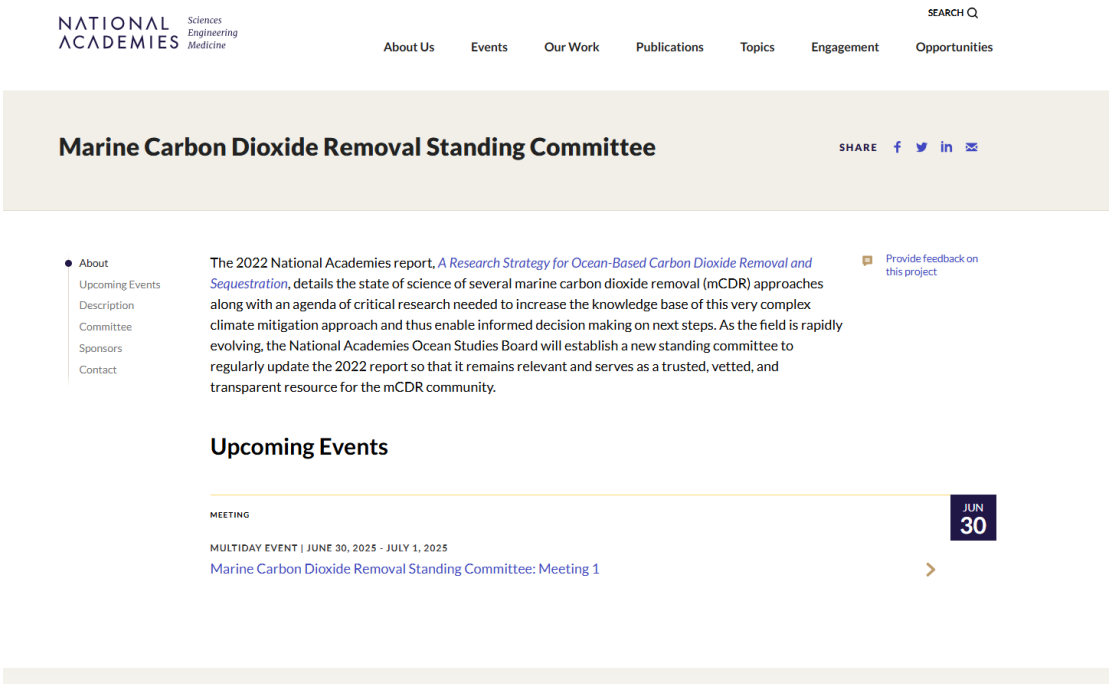
Kelly Oskvig, Study Director

Safah Wyne, Research Assistant

Study Timeline

March 2025	Project startup; release call for experts (due 3/18) Hold interviews and assemble committee
May 2025	Committee approved and announced Prepare for meeting 1
June 2025	Meeting 1: June 30-July 1, 2025 (virtual) Discussion with sponsor, committee start up, develop project strategy and timeline
July/August 2025	Meeting 2; TBD (DC/hybrid) Day 1: Information Gathering Day 2: Deliberations and report writing
October/November 2025	Meeting 3: October 21-22, 2025 (virtual) Prepare for peer review
January 2026	Meeting 4: January 27-28, 2026 (virtual) Prepare for release, discuss next updates
February 2026	End of cycle 1

Keeping up and helping out!



- **Stay up to date!**
  - nationalacademies.org/mCDR
  - Upcoming Events
  - Past Events
  - Relevant Publications
- **Participate!**
  - Peer Review
  - Public Meetings
  - Committee (future opportunity)
- **Contact us!**
  - Provide Feedback
  - Share resources
  - koskvig@nas.edu

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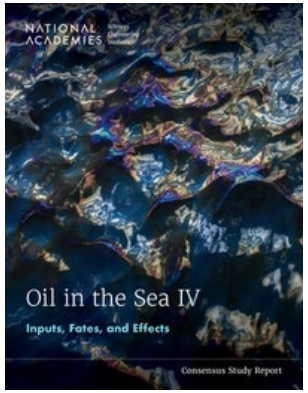
Consensus Study Process

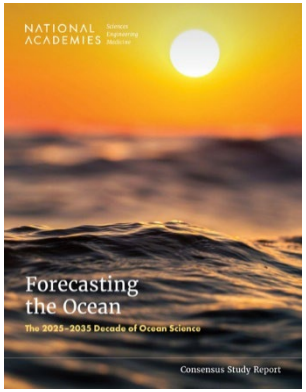
Kelly Oskvig, Study Director

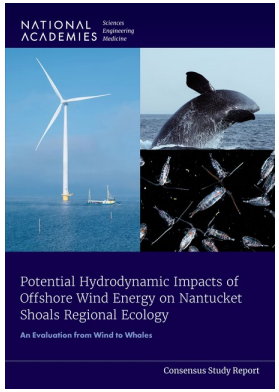
The National Academies Consensus Products

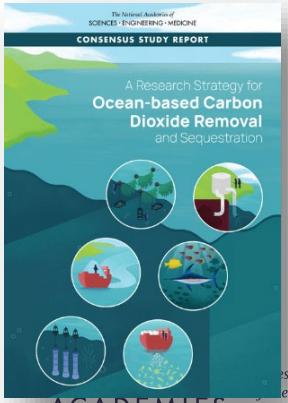
Expert, evidence-based & objective advice on science, engineering, and health matters.

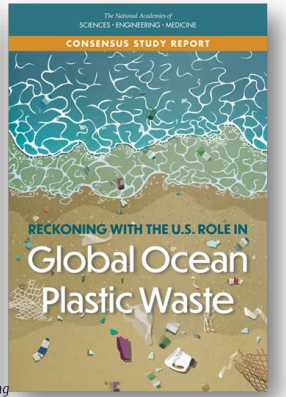
- Informs policy with evidence
- Sparks progress and innovation
- Confronts challenging issues for the benefit of society

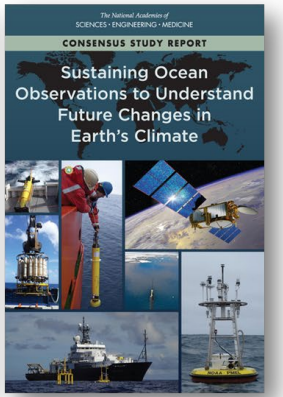


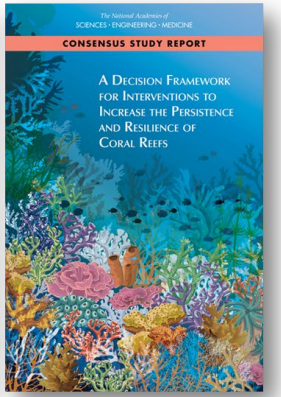


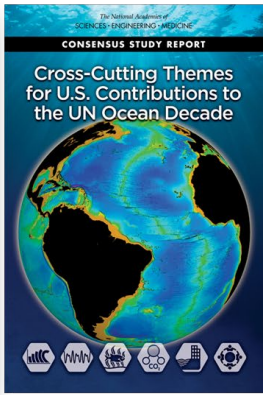






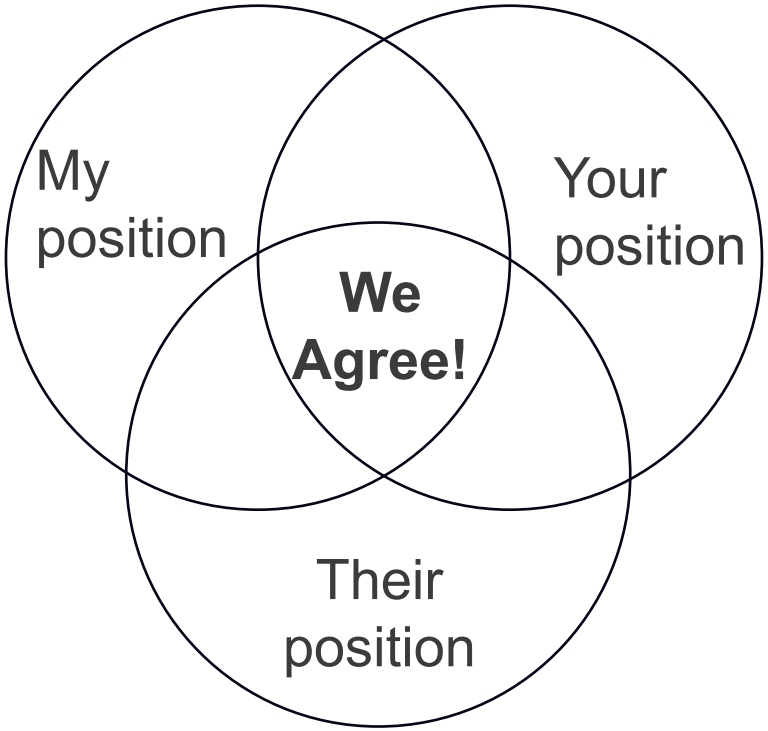






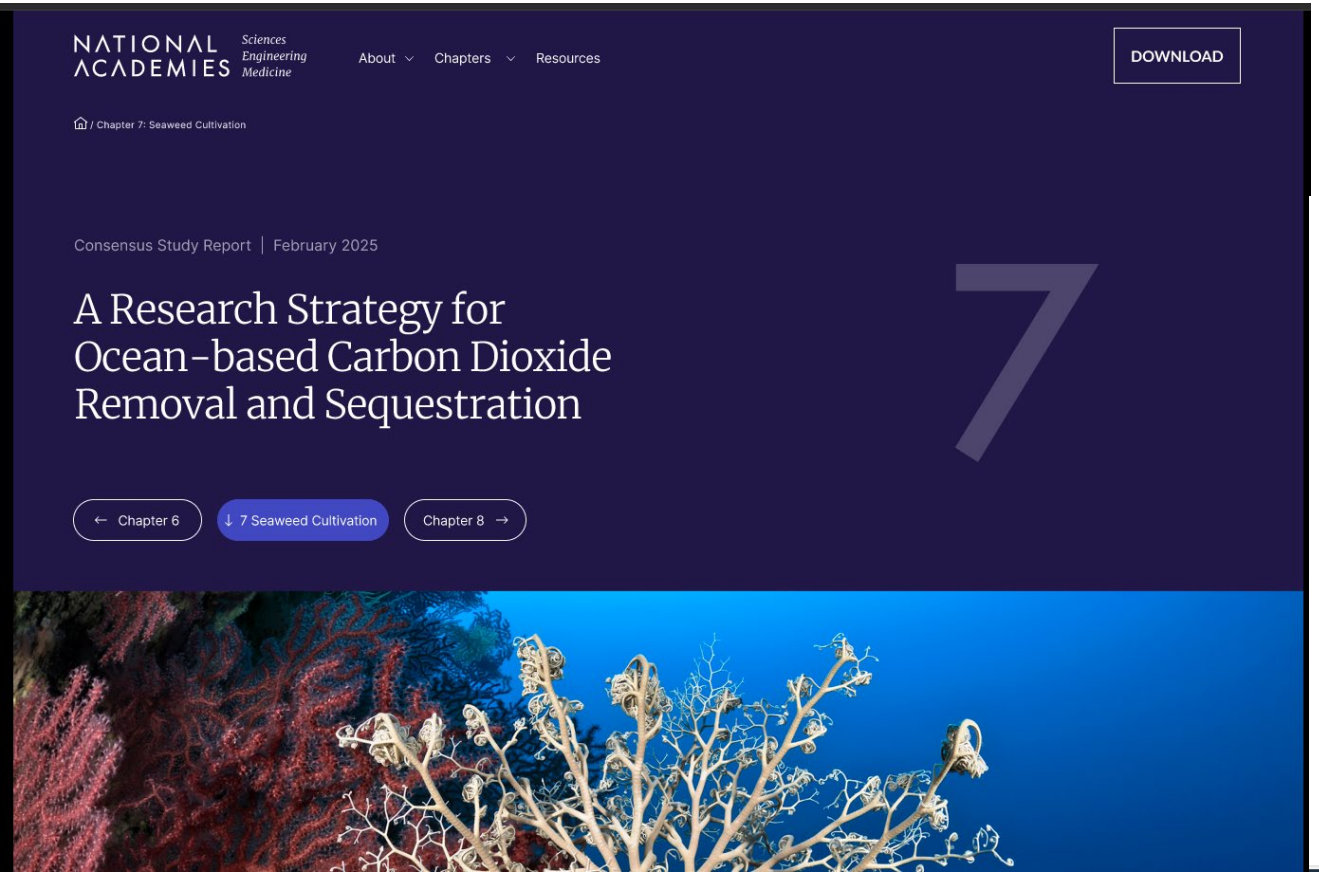
What do we mean by Consensus?

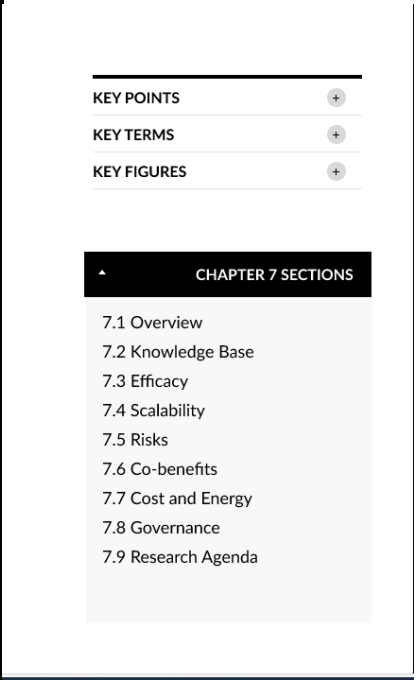
- Consensus means that everyone agrees
- The full report represents the views of the entire committee and is **authored by the entire committee**



Consensus Study Process

Living, Digital Version





Committee Roles

Committee Chair

- leader, facilitator and team builder for the committee
- public face of the committee
- run meetings
- help define work plan

Committee Members

- contribute and analyze materials
- participate in meetings
- provide input to meeting topics
- assist with meeting presentations

Staff Roles

Study Directors/Program Officers

- maintain contact with sponsors
- organize meetings
- collect/assimilate/disseminate information to committee
- organize communications efforts

Project Assistant

- keep us organized
- travel/meeting logistics
- reimbursements

Public Access and Transparency

Public meetings – any meeting that has attendees who are not Academies' staff or committee members needs to be public

Public Access File (PAF) – anything shared with the committee from an outside source needs to be included in the PAF (PowerPoint presentations, emails, unpublished data, proprietary data)

Federal Advisory Committee Act (FACA)

Media Interactions and Confidentiality

While the report is underway, committee members may discuss only the following items with reporters and colleagues, or on social media:

1. the project's statement of task,
2. the committee roster
3. the identity of the sponsors
4. factual and publicly available background information

Any content discussed in closed session is not to be made public.

Contact National Academies Media Officer **Megan Lowry** at 202-334-3547 or mlowry@nas.edu for questions related to media

Thank you for volunteering to be a part of this committee!