



CHARTER
of the
MARINE CARBON DIOXIDE REMOVAL FAST TRACK ACTION COMMITTEE
OF THE SUBCOMMITTEE ON OCEAN SCIENCE AND TECHNOLOGY
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

A. Official Designation

The Marine Carbon Dioxide Removal Fast Track Action Committee (MCDR-FTAC) is hereby established by action of the National Science and Technology Council (NSTC). The NSTC, a Cabinet-level council, is the principal means for the President to coordinate science and technology policies across the Federal Government (Executive Order 12881¹). The MCDR-FTAC provides overall guidance and direction to the NSTC through the Subcommittee on Ocean Science and Technology (SOST) regarding marine carbon dioxide removal science policy.

B. Purpose and Scope

The MCDR-FTAC responds to a key recommendation of the Ocean Climate Action Plan (OCAP) to facilitate and accelerate relevant policy and research on marine carbon dioxide removal (CDR) and storage. CDR is the process by which carbon dioxide (CO₂) is removed and stored away from the atmosphere as part of a portfolio of climate mitigation solutions. The sixth Assessment Report by the Intergovernmental Panel on Climate Change identified CDR as “a necessary element to achieve net zero CO₂ and greenhouse gas (GHG) emissions globally and nationally, counterbalancing residual emissions from hard-to-transition sectors.” In addition to reducing anthropogenic carbon emissions, CDR is an important contributing element in scenarios that limit global surface warming to +2°C or lower by 2100.² As one of the largest carbon reservoirs on Earth, the marine system plays a crucial role in storing anthropogenic carbon. A variety of marine-based CDR approaches have been proposed to enhance the current rates of ocean CO₂ removal and storage. As of yet, however, none of the marine-based CDR methods are ready for deployment,

¹ Executive Order 12881—Establishment of the National Science and Technology Council, November 23, 1993 <https://www.govinfo.gov/content/pkg/WCPD-1993-11-29/pdf/WCPD-1993-11-29-Pg2450.pdf>

² IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>

and there is an urgent need to resolve key knowledge gaps for different marine CDR techniques.³ This has spurred demand for accelerated research and development on marine CDR across multiple sectors and bases of knowledge.

The OCAP⁴ calls for “a substantial ramp up in marine CDR research and development investments. Enhanced interagency coordination is needed to evaluate its efficacy, permanence and safe, regulated implementation of techniques deployed at scale necessary to mitigate climate change, while not adversely impacting human health, the marine environment, and other uses of the sea.” Marine CDR research spans multiple sectors (e.g., Federal, academic, private, military, etc.) and disciplines (physical and chemical oceanography, ecology, socioeconomics, environmental justice, etc.). It is essential, therefore, to facilitate coordination and collaboration across the multiple Federal Departments and Agencies who oversee different aspects of marine CDR research and to help guide non-Federal stakeholders regarding their engagement, research, deployment, and investment timelines for marine CDR.

C. Functions

The MCDR-FTAC is charged with developing an implementation plan to advance three specific actions called for in OCAP:

- Recommendations and guidelines for policy, permitting, and regulatory standards for marine CDR research and implementation;
- A comprehensive Federal research and scaled testing program for promising marine CDR approaches to identify CDR benefits, risks, and challenges;
- A U.S. Marine CDR Initiative to serve as a coordination vehicle for public-private funded research activities.

In creating the implementation plan, the MCDR-FTAC should take into consideration several elements highlighted in OCAP:

- Ensure robust, sustained, and verifiable ocean observations (*in situ*, remote sensing) are in place and fit-to-purpose;
- Develop standards for carbon accounting for marine CDR approaches;
- Design a plan for testing promising marine CDR approaches, focusing on atmospheric CO₂ removal, the permanence of carbon storage, scalability, energy, and resource demands, and costs at local-to-regional scales that include opportunities for collaboration and co-option of marine CDR approaches for mitigating ocean acidification and providing other co-benefits;
- Evaluate the environmental and social impacts of marine CDR approaches.

In conducting its work, the MCDR-FTAC may, as needed:

³ National Academies of Sciences, Engineering, and Medicine. (2022). A Research Strategy for Ocean-based Carbon Dioxide Removal and Sequestration. The National Academies Press.

<https://nap.nationalacademies.org/catalog/26278/a-research-strategy-for-ocean-based-carbon-dioxide-removal-and-sequestration>.

⁴ https://www.whitehouse.gov/wp-content/uploads/2023/03/Ocean-Climate-Action-Plan_Final.pdf

- Gather input from stakeholders inside and outside government, using a variety of methods, including but not limited to: convening meetings, requesting data, and issuing public requests for information or comment;
- Engage with staff at the programmatic level, particularly those involved in funding marine CDR efforts or where marine CDR is likely to intersect their mission space;
- Create working groups to focus on each of the MCDR-FTAC's goals; and
- Consult and collaborate with other NSTC bodies as needed.

The MCDR-FTAC will deliver the implementation plan to SOST with a target goal of no later than 12 months following the approval of the MCDR-FTAC charter.

D. Membership

The following departments and agencies are represented on the MCDR-FTAC:

Army Corps of Engineers / Army of Civil Works
 Department of Commerce (NOAA (co-chair), NIST)
 Department of Energy
 Department of the Interior (BOEM, BSEE, USGS)
 Department of State
 Environmental Protection Agency
 National Aeronautics and Space Administration
 National Science Foundation
 Smithsonian Institution
 Office of Naval Research
 United States Department of Agriculture

The following components of the Executive Office of the President shall also be represented on the MCDR-FTAC:

Council of Environmental Quality
 Office of Management and Budget
 Office of Science and Technology Policy (co-chair)

The FTAC may self-organize as needed, such that members may be organized into informal subgroups based on the FTAC's goals and functions. Members can choose to be on one or more subgroups.

Cooperative departments and agencies shall include other Executive organizations, departments, and agencies as the Co-Chairs may designate, as appropriate.

E. Private-Sector Interface

The MCDR-FTAC may seek advice from the President's Council of Advisors on Science and Technology to secure appropriate non-governmental organizations, academic, industry, and private sector advice and will recommend to the NSTC and/or the OSTP Director the nature of

additional private-sector¹⁷ advice needed to accomplish its mission. The MCDR-FTAC may also interact with and receive *ad hoc* advice from various private-sector groups consistent with the Federal Advisory Committee Act.

F. Termination Date

Unless renewed by the Subcommittee on Ocean Science and Technology prior to its expiration, the MCDR-FTAC shall terminate no later than 14 months after the date of approval.

G. Determination

I hereby determine that the establishment of the Marine Carbon Dioxide Removal Fast Track Action Committee is in the public interest in connection with the performance duties imposed on the Executive Branch by law, and that such duties can best be performed through the advice and counsel of such a group.

Approved:



Alexandra Isern, National Science Foundation
Co-Chair, Subcommittee on Ocean Science and Technology

September 15, 2023

Date



Danielle Farelli, Office of Science and Technology Policy
Co-Chair, Subcommittee on Ocean Science and Technology

September 15, 2023

Date



Steve Thur, National Oceanic and Atmospheric Administration
Co-Chair, Subcommittee on Ocean Science and Technology

September 19, 2023

Date



September 19, 2023

Tom Drake, Office of Naval Research
Co-Chair, Subcommittee on Ocean Science and Technology

Date



9/19/2023

Kei Koizumi,
Principal Deputy Director for Policy, and
Acting Executive Director of the National Science and Technology Council,
Office of Science and Technology Policy

Date