Carbon180

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Ocean Policy at Carbon180

Marine carbon dioxide removal (mCDR) holds immense promise for scaling carbon removal to the billions of tons we need to remove to avoid the worst impacts of climate change. This is a pivotal moment for mCDR in the U.S. - early federal investment supported foundational research and development, and catalyzed start-ups, private investment, and public-private partnerships. ***Now is the time to build on the early momentum that positioned the U.S. as a global leader and set mCDR on the path to scale***.

Our approach to mCDR policy transcends partisanship and appeals to wide audiences. It also reaches those who are most heavily impacted by climate change and therefore stand to benefit most from solutions like mCDR when developed responsibly. The mCDR industry is moving fast, and federally-led policy is needed to ensure that scaling and deploying mCDR only advances if it is highly accountable, just, and equitable.

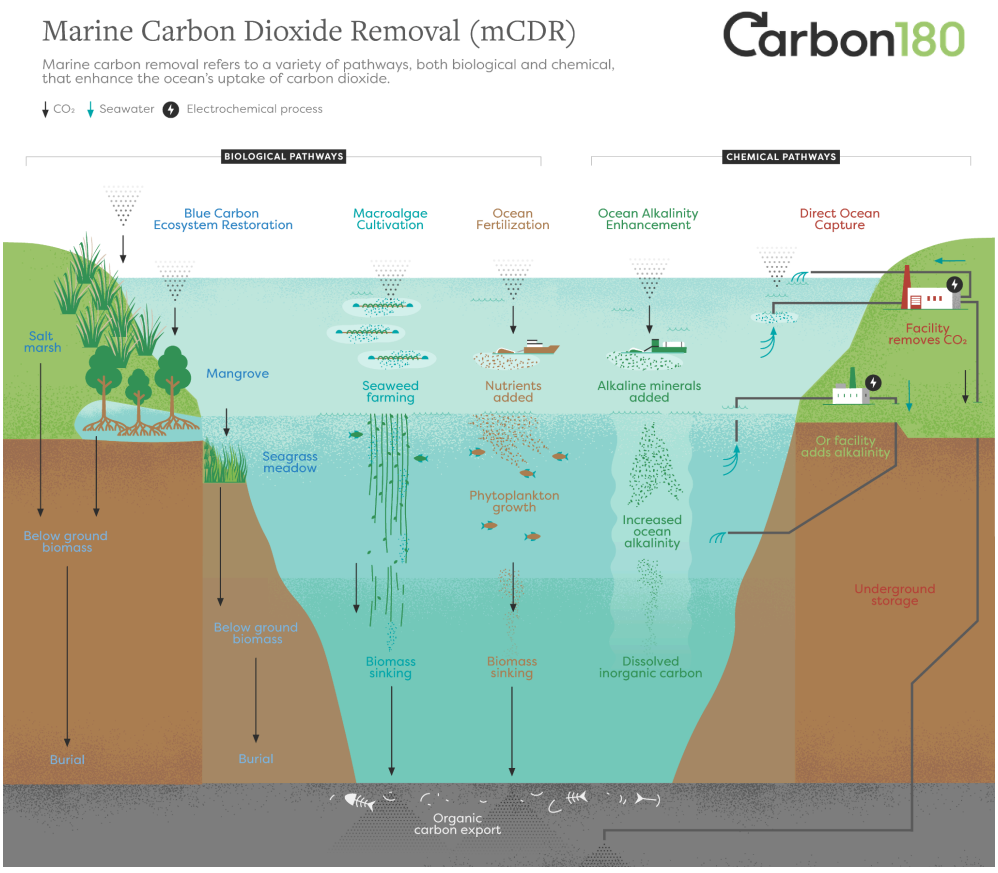
To meet this moment, we are leading with opportunity-forward education and advocacy to identify new mCDR champions and create proactive ocean policy that paves the way for equitable and responsible mCDR at scale.

C180's Ocean Policy Team supports the development of responsible mCDR through innovative policy, advocacy, and field building approaches. C180 advances ocean justice by providing accessible tools that empower local communities to engage in mCDR conversations. Working at the federal, state, and local levels, we strive to ensure that mCDR is scaled in a responsible manner that minimizes environmental risk and maximizes co-benefits for both people and the planet.

Ocean Policy Team Priorities

- **Federal Policy -** The core focus of C180's federal ocean policy priorities center around the protection of existing programs and funding for mCDR, expanding bipartisan support for future mCDR research, development, and deployment, and leading development of future mCDR policy.
- **Responsible Governance -** The Ocean Policy Team works with partners across sectors to address several remaining challenges regarding the effective and responsible permitting of mCDR projects, and governance of the sector as a whole. Efforts are focused on resolving the current patchwork of mCDR governance to create purpose-built structures for mCDR at state, national, and international levels.
- **Empowering Communities -** C180 takes pride in centering environmental justice in all of our work. One of the most direct ways we accomplish this is through our community regranting initiatives. We are investing in community-led mCDR in partnership with the C180 Environmental Justice team. We currently support a cohort of three community-led teams in Alaska, Hawai'i, and Puerto Rico to foster community-centered mCDR engagement in their regions.
- **mCDR Coalition Building -** C180 is working with partners to convene a wide-net, multi-sectoral mCDR coalition inclusive of industry, NGO's, and academia. The mCDR coalition will serve as a neutral space for discussing concerns, brainstorming how to overcome barriers, and co-developing a widely accepted framework for just, equitable, and highly accountable mCDR research, deployment, and governance.

Marine Carbon Dioxide Removal



As the world's largest carbon sink, the ocean is one of our greatest, and most underutilized tools in the fight against climate change. Marine carbon dioxide removal, or mCDR, encompasses a suite of technologies and nature-based solutions that tap into the ocean's natural carbon absorption processes and maximize the amount of carbon dioxide (CO_2) it can absorb. mCDR approaches hold great promise as climate solutions and may ultimately be the most affordable and scalable path to removing gigatons of carbon from the atmosphere.

The economic outlook for mCDR is also promising - projected to be a nearly $2.5 billion industry by 2032. The U.S. is a global leader in this industry with early investments from both government and the private sector advancing innovative approaches while creating high-quality jobs, expanding resiliency, and unlocking new environmental and economic benefits for communities. Though questions remain for this emerging sector and further research is needed to understand and verify mCDR scalability and durability along with its associated economic, environmental, and societal implications, interest in mCDR continues to grow across sectors as a hopeful pathway toward a climate change solution.

Primary Marine Carbon Dioxide Removal Pathways

Blue Carbon Ecosystem Restoration	The restoration, expansion, and protection of coastal marine ecosystems that have excellent carbon sequestration and storage abilities including mangroves, salt marshes, and seagrasses.
Seaweed Farming	Farming of ocean plants such as kelp or seaweeds to increase CO_2 uptake in the surface/shallow ocean (or Great Lakes) and conversion to long-term carbon storage via sinking, durable goods, or ocean food-webs.
Ocean Fertilization	Increasing the concentration of nutrients (usually iron) in the surface ocean to allow for enhanced phytoplankton growth and carbon export to the deep ocean.
Ocean Alkalinity Enhancement	Increasing seawater alkalinity (increasing pH) in order to allow for more CO_2 absorption by the surface ocean and conversion to long-term storage as dissolved bicarbonate. This can be done by mineral additions or electrochemical methods.
Direct Ocean Capture	The removal of CO2 directly from seawater via either electrolysis or electrodialysis.