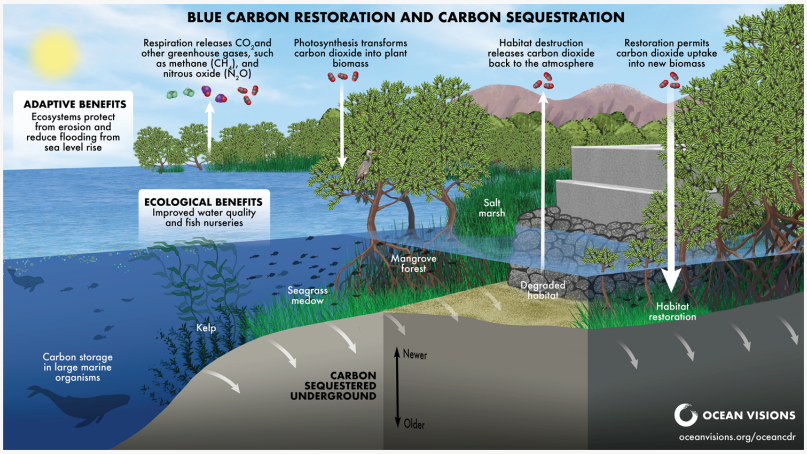
Ocean Visions Creates Road Map to Advance Research for the Restoration of Blue Carbon

Effort to improve understanding of the potential of restoring blue carbon as a carbon dioxide removal strategy



While the restoration of blue carbon systems holds promise as a viable natural climate solution, continued research and field testing is needed to determine its full potential.

ATLANTA, GEORGIA, USA , December 5, 2023 /EINPresswire.com/ -- Ocean Visions has released the latest in a series of road maps designed to accelerate research and development of potential ocean-based solutions to the climate crisis. The new road map on restoring blue carbon captures the state of various approaches, knowledge gaps, and a set of priorities to improve our understanding of the restoration of blue carbon as a carbon dioxide removal strategy.

Blue carbon refers to the ongoing carbon capture and storage processes by coastal and marine ecosystems, including mangrove forests, salt marshes, seagrass beds, kelp forests, and carbon in marine animals. Distinct from the protection of blue carbon systems, which avoids future emissions, the restoration of blue carbon systems removes additional carbon dioxide by re-establishing natural carbon sinks. While the restoration of blue carbon systems holds promise as a viable natural climate solution, continued research and field testing is needed to determine its full potential.

> The restoration of blue carbon systems holds promise as a means not only to help mitigate climate change, but also improve ocean health and our wellbeing."
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> *Ocean Visions Chief Scientist David Koweek, PhD*

"This road map will support efforts to understand carbon storage duration, address technical challenges around restoration, and develop better monitoring, reporting, and verification systems," said Ocean Visions Chief Scientist David Koweek.

The blue carbon road map provides a focused agenda to advance research and development, allowing scientists, engineers, entrepreneurs, investors, philanthropists, and more to maximize their contributions. The road map was developed through the Ocean Visions - UN Decade Collaborative Center for Ocean-Climate Solutions and Global Ecosystem for Ocean Solutions and with input from across eight countries. It is designed to be updated and refined regularly as advances emerge in science, technology, governance, and policy.

While not a substitute for emission reduction, carbon dioxide removal is acknowledged as an imperative for slowing climate change. The Intergovernmental Panel on Climate Change has made clear in its special report that large-scale carbon dioxide removal will be needed this century to have a chance at holding temperatures to a 1.5°C increase—the goal set out in the Paris Agreement.

The ocean is the largest carbon sink on the planet, already holding about 50 times more carbon in the deep ocean than what is in the atmosphere. There are a number of ways the ocean naturally cycles carbon that could be enhanced and accelerated, and the sheer size of the ocean means that these potential solutions could be scaled to meaningful levels. A number of ocean-based carbon dioxide removal approaches are being explored, but each requires additional research and testing.

Ocean Visions has been working since 2020 to build a suite of road maps for accelerating research and testing of ocean-based carbon dioxide removal pathways. In addition to restoring blue carbon, the suite includes macroalgal cultivation and carbon sequestration, microalgal cultivation and carbon sequestration, ocean alkalinity enhancement, and electrochemical ocean carbon dioxide removal. Road maps also were developed for two cross-cutting issues of importance: building and maintaining public support and expanding finance and investment.

“The ocean presents an enormous opportunity to sequester carbon,” said Ocean Visions Program Officer Sarah Mastroni. “This road map on blue carbon, along with our previously published road maps, helps advance our collective knowledge of potential ocean-based solutions to the climate crisis, and does so in an evidence-based, precautionary approach.”

Covering 70 percent of the planet, the ocean has borne the brunt of damage caused by our disrupted climate, absorbing more than 90 percent of the excess heat trapped on the planet and 26 percent of all civilization’s carbon dioxide pollution.

“Removing legacy carbon pollution from our air and water is essential to interrupting dangerous ocean warming and acidification,” said Koweek. “The restoration of blue carbon systems holds promise as a means not only to help mitigate climate change, but also improve ocean health and our wellbeing.”

SUPPORT FOR THE ROAD MAP COMES FROM: Wells Fargo Foundation, ClimateWorks

Foundation, Schmidt Marine Technology Partners, Jeremy and Hannelore Grantham Environmental Trust, and Builders Initiative.

ABOUT OCEAN VISIONS

Ocean Visions is a non-profit organization that catalyzes innovation at the intersection of the ocean and climate crises. We facilitate multisector collaborations from within our Network and beyond, working with leading research institutions, the private sector, and public-interest organizations to fully explore and advance responsible and effective ocean-based climate solutions. In short, we work to stabilize the climate and restore ocean health. To learn more, visit www.oceanvisions.org or follow @Ocean_Visions on X.

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