

# Opportunities for Ocean-Climate Action in the United States

## *New Report Shows the Ocean Can Play an Essential Role in the Fight against Climate Change*

Opportunities for Ocean-Climate Action in the United States, a new report from CEA Consulting, details a range of ocean-based opportunities, listed below, to reduce greenhouse gases. Collectively, these ocean-based measures can contribute up to 14% of the required emissions reductions in the U.S. to limit warming to 2 degrees Celsius by 2050. These ocean-based solutions are also primed to create jobs and promote equity in our coastal communities and throughout the country.

### Ocean-Based Opportunities



#### Offshore Wind Energy

Increasing offshore wind production is the single most significant opportunity to reduce emissions in the U.S. through ocean-based approaches. Offshore wind produces energy in late hours of the day to complement solar and can be located close to coastal population centers, thereby making it an important component of a reliable clean energy portfolio. **It has the potential to reduce U.S. GHG emissions by up to 8% over the next 30 years—the equivalent of taking about 100 million passenger vehicles off the road.**



#### Blue Carbon Ecosystems

Blue carbon refers to the carbon stored in coastal and marine ecosystems. Conserving and restoring these ecosystems—such as mangroves, salt marshes, and seagrass—will prevent the release of the massive amounts of carbon stored in them and will reinforce shorelines from flooding and extreme weather, provide recreation opportunities and fisheries habitat, and improve water quality. Seaweed can also be cultivated for the purposes of carbon sequestration. **Conserving and restoring blue carbon ecosystems, as well as expanding kelp cultivation can reduce an estimated 16 Mt CO<sub>2</sub>e annually by 2050—that's more than the gross annual emissions of the state of Delaware.**



#### Reducing Shipping Emissions

The shipping sector is the second largest opportunity for ocean-based greenhouse gas emissions mitigation. Reducing shipping emissions would also help reduce local air pollution (PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>x</sub>) near port facilities, thereby advancing public health and environmental justice objectives. **Fully decarbonizing the shipping sector could reduce annual emissions by about 60 Mt CO<sub>2</sub> in 2050—the equivalent of shutting down 15 coal-fired power plants.**



#### Strong Fisheries Management

By improving the efficiency of seafood production, both wild and farmed, the U.S. could reduce emissions by 7 Mt CO<sub>2</sub>e per year by 2050. **Add to this the 10–39 Mt CO<sub>2</sub>e annual mitigation potential from shifting consumption patterns to a more seafood-heavy diet and fisheries-related solutions add up to 14–46 Mt CO<sub>2</sub>e per year. At the high-end, that's equivalent to the annual gross emissions of the state of Nevada.**



#### Carbon Capture and Storage (CCS)

Carbon capture and storage covers the suite of technologies used to capture carbon dioxide (CO<sub>2</sub>) from point sources for permanent storage in geologic formations such as saline aquifers, depleted oil and gas fields, and basaltic rock. Suitable geologic formations under the seabed could theoretically hold trillions of tons of CO<sub>2</sub>. Current limitations are largely political, social, or economic rather than technical. **We estimate that CCS systems will capture about 60 MtCO<sub>2</sub> per year by 2050, which is roughly the total annual GHG emissions of the state of Oregon.**

## Ocean-Based Actions

The report includes recommendations for specific actions that can harness ocean-based solutions to climate change:



### Offshore Wind Energy

**Set national targets for offshore wind production, invest in market development and supporting infrastructure, and streamline the project siting and permitting process**—all while assessing and addressing the needs and concerns of different user groups, from fishers and Tribal communities to the marine environment itself.



### Blue Carbon Ecosystems

**Strengthen policies to bring blue carbon habitat loss rates to zero, such as a “no net blue carbon loss” policy and implement recommendations to strengthen the compensatory mitigation rule** (such as a 3-for-1 offset requirement) for unavoidable habitat loss under the Clean Water Act.



### Reducing Shipping Emissions

**Leverage EPA authority to set federal emissions reduction targets** in line with or exceeding International Maritime Organization (IMO) targets for rapid decarbonization of the U.S. shipping sector and implement National Mandatory Vessel Speed Reduction Programs within 200 nautical miles of shore.



### Strong Fisheries Management

**Defend and strengthen the Magnuson-Stevens Act** to support climate-adaptive management of U.S. fisheries.



### Carbon Capture and Storage (CCS)

**Increase the 45Q tax credit** from \$50 to \$65 per ton of CO<sub>2</sub> captured and stored and **extend the program beyond the current 2023 expiration date.**

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***“It is high time for ocean actions to be appreciated for the significant power they provide as solutions. When we pay attention to the ocean, people win, the economy wins, and nature wins.”***

*—Dr. Jane Lubchenco, University Distinguished Professor, Oregon State University;  
former Administrator, NOAA*

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To learn more about ocean-based solutions for mitigating climate change and actions policymakers can take to start moving in the right direction, visit <https://oursharedseas.com/oceanclimateaction>.