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Coastal Americans Overwhelmingly Support Ocean-Based Carbon Dioxide Removal & Are Alarmed About Climate Change Impacts

More than three-quarters of coastal residents, across regions and political parties, support enhancing the ocean's natural ability to remove carbon dioxide from the atmosphere

A poll released today finds that people who live on America's coastlines support expanding ocean-based carbon dioxide removal projects and believe this will be beneficial for their communities. The [poll](#) from Nexus Polling, the Yale Program on Climate Change Communication, and the George Mason University Center for Climate Change Communication, identifies that coastal residents are concerned about excess carbon dioxide in the atmosphere and understand that it is a major contributor to climate change. There is bipartisan agreement among coastal Americans that in order to combat climate change, we need to reduce carbon dioxide emissions and remove carbon dioxide from the atmosphere.

"Americans who live closest to the ocean understand that carbon pollution is causing climate change and that their communities are at risk," said **Dr. Anthony Leiserowitz, Director of the Yale Program on Climate Change Communication**. "We also find that coastal residents strongly support efforts to help the oceans store more carbon and reduce global warming."

[Ocean-based carbon removal](#) refers to methods that boost the ocean's natural processes to absorb carbon. There are a range of methods for ocean CDR, from growing kelp to ocean alkalinity management. The ocean, spanning 70% of the world's surface area, already acts as one of the planet's most important carbon sinks (although this has come at a high cost to the ocean's health). Ocean CDR solutions generally store carbon deeper in the ocean than where ocean acidification is taking place, potentially helping to restore ocean ecosystems.

"Coastal Americans want to see investments in carbon removal *now*," said **Dr. Edward Maibach, director of the George Mason University Center for Climate Change Communication**. "Across all demographics, coastal residents support a variety of carbon removal approaches. They see the value in increased ocean-based carbon removal, including for jobs creation."

The survey was conducted with 2,054 adults (age 18+) in coastal counties in the United States from February 11 to 23, 2022, to assess familiarity with and support for ocean-based carbon dioxide removal (CDR). The survey data was weighted to reflect a representative sample of adults (age 18+) in all coastal counties by age, gender, race, Hispanic ethnicity, educational attainment, census region, and coastal region. The margin of error for the overall survey is +/- 2.5% at the 95% confidence level.

Coastal residents say ocean-based carbon removal benefits their communities.

- More than 8 in 10 (82%) of coastal residents, across region and party, support enhancing the ocean's natural ability to remove carbon dioxide.
- Roughly two-thirds of coastal residents along the Pacific (68%) and Atlantic (66%) coasts, and about 6 in 10 (59%) who live along the Gulf of Mexico, see excess carbon dioxide as a contributor to climate change.
- At least three-quarters of adults who live in coastal counties say expanding ocean carbon removal will have a positive impact on marine and coastal wildlife (76%) and ocean water quality (75%). Roughly two-thirds say it will increase good-paying jobs (68%), improve ocean-based recreation (67%), and benefit protection of Indigenous lands (64%). About 6 in 10 (58%) say it will have a positive impact on tourism.

Multiple forms of ocean-based carbon removal have strong support, and biological approaches are the most popular.

- Eight in 10 (80%) coastal residents support expanding biological approaches to reducing carbon dioxide in the atmosphere, including growing more ocean plants and expanding marine ecosystems.
- Roughly 6 in 10 support expanding electro-chemistry approaches where a machine separates carbon dioxide from seawater and returns alkaline water back into the ocean (57%), and mineral-based approaches that add alkaline minerals to the ocean to permanently store atmospheric carbon dioxide and de-acidify the ocean (56%).
- While most Democrats support all of these approaches (84%, 63%, and 63%, respectively), just half of Republicans support electro-chemistry (50%) and mineral-based (50%) approaches. Nearly 8 in 10 (78%) Republicans support biological approaches.

Coastal residents are seeing the impacts of climate change in their communities.

- A majority of adults in coastal counties see ocean pollution (81%), harm to ocean wildlife (74%), the acidification of ocean waters (65%), extreme weather (65%), loss of coastal habitats (65%), harm to coastal communities (61%), sea level rise (60%), warming waters (55%), and excess carbon dioxide in the ocean (55%) as major problems. More than 7 in 10 say climate change is worsening each of these threats.
- Roughly 8 in 10 (78%) Democrats and about two-thirds (64%) of Independents say excess carbon dioxide is contributing to climate change. Roughly half (46%) of Republicans say it is contributing to climate change.

Coastal residents want to see action on climate, and it's an issue that is important to their vote.

- More than three-quarters (77%) of coastal residents say climate change is important to their vote.
- Support for expanding carbon removal is high among Democrats and Republicans alike: eighty-six percent of Democrats, 76% of Independents, and 80% of Republicans support enhancing the ocean's natural ability to remove carbon dioxide.

- More than three-quarters of coastal residents, across region and party, support protecting and restoring coastal ecosystems (86%), enhancing the ocean's natural ability to remove carbon dioxide (82%), and developing offshore wind farms to increase renewable energy (77%). By contrast, just about 4 in 10 (42%) support expanding offshore drilling for oil and natural gas.

Coastal residents strongly support carbon removal research and investments, for various forms of removal.

- More than three-quarters (76%) of coastal residents support increasing investments for ocean-based carbon removal research, including close to 4 in 10 (38%) who strongly support it.
- Roughly 9 in 10 support planting new forests and trees (91%), restoring and protecting coastal ecosystems (89%), and encouraging farmers and food producers to use sustainable agricultural practices (87%).

Click [here](#) to view the poll results.

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***[Nexus Polling](#)** in partnership with the Yale University Program on Climate Change Communication and the George Mason University Center for Climate Change Communication, conducts polling on climate change, public policy and the energy transition.*