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Responsibility

# White paper: Permitting a 'roadblock' to expanding seaweed cultivation in California

7 July 2022

By Responsible Seafood Advocate


## Permitting for seaweed cultivation in California is often 'complex, costly and time-consuming'

The permitting process is preventing the expansion of seaweed cultivation in California, according to a new [white paper](https://scholarship.law.columbia.edu/faculty_scholarship/3523/) ([https://scholarship.law.columbia.edu/faculty\\_scholarship/3523/](https://scholarship.law.columbia.edu/faculty_scholarship/3523/)) from Columbia University's [Sabin Center for Climate Change Law](https://climate.law.columbia.edu/) (<https://climate.law.columbia.edu/>).

The paper, which examines barriers to seaweed permitting for carbon sequestration in California, is part of a series of white papers exploring the legal issues associated with several ocean-based carbon dioxide removal strategies, including ocean alkalinity enhancement and artificial upwelling and downwelling.

"Permitting for seaweed cultivation in California requires approvals from various state and federal agencies, pursuant to state and federal land use and environmental laws," wrote the authors of the white paper entitled *Permitting Seaweed Cultivation for Carbon Sequestration in California: Barriers and Recommendations*. "Due to the multiple steps involved, the permitting process for seaweed farming operations can be costly and may take several years to complete."



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# PERMITTING SEAWEED CULTIVATION FOR CARBON SEQUESTRATION IN CALIFORNIA: BARRIERS AND RECOMMENDATIONS

By Korey Silverman-Roati, Romany M. Webb, and Michael B. Gerrard  
June 2022

A barrier to expanding seaweed cultivation in California is the “complex, costly and time-consuming” lease and permitting process, says a white paper from Columbia University.

Seaweed cultivation refers to the growing of kelp and other macroalgae that uptake carbon dioxide as they grow. To offset emissions, cultivated seaweed could be used to replace more greenhouse gas-intensive products (like animal-based foods) or in bioenergy systems. Seaweed could also be sunk in the deep sea for the purposes of carbon sequestration.



(<https://aquabounty.com/>).

Seaweed cultivation off the California coast is still in the early stages, with only two commercial, open-water seaweed farms currently existing in California waters, but farmers have expressed growing interest in expanding the practice. However, a barrier to expanding seaweed cultivation in California is the “complex, costly, and time-consuming” lease and permitting process. Other states in the U.S., namely Maine and Alaska, have permitting systems designed to be more supportive of seaweed cultivation.

The white paper also explores possible reforms to streamline California’s permitting process, while maintaining appropriate environmental and other safeguards. It makes five recommended changes to the lease and permitting process in California.

“Ideally, these could serve to lessen or remove unnecessary roadblocks to permitting, while still maintaining important environmental and other review of prospective projects,” wrote the authors.

**[Read the full paper here \(https://scholarship.law.columbia.edu/faculty\\_scholarship/3523/\)](https://scholarship.law.columbia.edu/faculty_scholarship/3523/)**.

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