

BLUE CARBON GREEN FIELDS

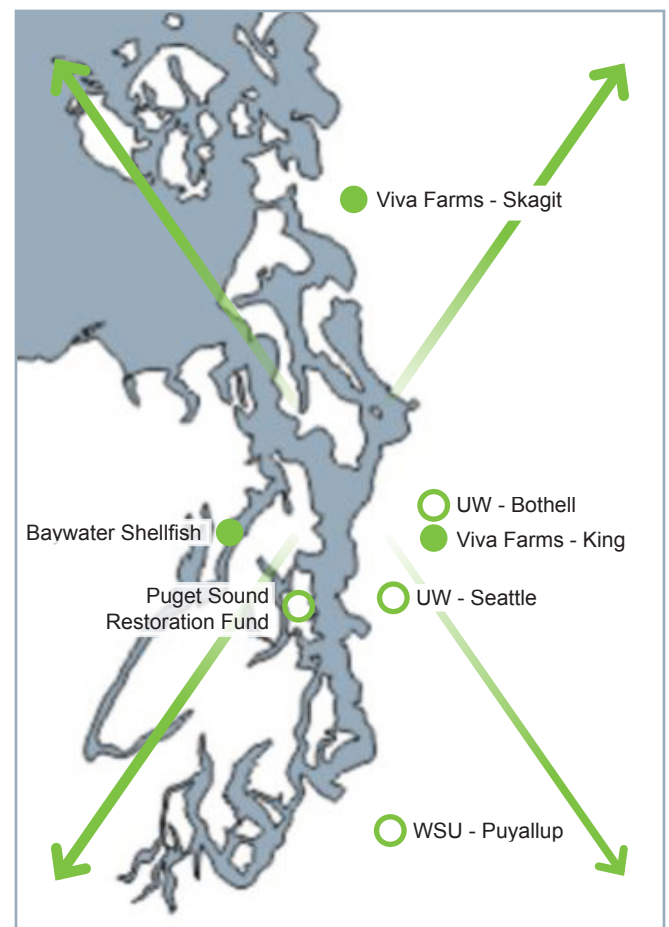
Repurposing Seaweed to Benefit Sea and Soil in the Pacific Northwest

Have you ever considered developing a market for the seaweed that accumulates on your shellfish gear? [Blue Carbon Green Fields](#)—part of the [Center for Sustainable Commodities Markets program](#)—is seeking to do just that by re-framing and scaling the traditional practice of enriching cultivated soils with seaweed. This 5-year (2024-2028) exploratory research project is engaging Puget Sound aquatic (sea) and terrestrial (land) farmers in mutually beneficial collaborations to repurpose ‘nuisance’ seaweed removed from shellfish gear as an agricultural soil amendment. Read on to learn more about this effort, and how to find out if your shellfish farm is eligible to participate!

Project Background

If you’re a shellfish grower, your intertidal gear may become fouled by seaweed during spring/summer blooms. Seaweeds—especially green *Ulva* (aka ‘sea lettuce’)—grow quickly and abundantly during warm months, fueled by nutrients from upland sources, the ocean, and the shellfish themselves. When these blooms decompose, the carbon and nutrients they’ve absorbed over the growing season are rapidly released, triggering processes that acidify seawater and deprive shellfish of oxygen. These conditions can also harm shellfish larvae and other species that are sensitive to ocean acidification, like Dungeness crab and pteropods.

While excess carbon in seawater is causing problems for shellfish growers, the opposite is true for land farmers, whose soils often suffer from *too little* organic carbon. A common method for boosting soil carbon is the application of compost or mulch, which also supplies nutrients and improves water retention. Commercial compost can be costly however, and many Puget Sound farmers are interested in the potential of seaweed—which also contains valuable micronutrients and biostimulants—as an alternative. Repurposing seaweed as a soil amendment could mean healthier farms and lower costs for sea and land farmers alike, as well as potential marketing opportunities and/or premiums stemming from implementation of innovative sustainable practices.



LEGEND

-  Supporting Partner
-  Participating Farm

How will it work?

The BCGF research team will provide comprehensive technical assistance to participating shellfish farms throughout all phases of the project, including construction of on-site drying systems; seaweed harvest, drying, storage, and transport; data collection; and documentation. In addition, team members will conduct rigorous environmental and economic analyses to capture the benefits of novel seaweed-to-soil practices. Findings will be shared with participating farmers to support project-related marketing and communications. They will also be used to establish a simple verification framework to help participants track inputs, efforts and outcomes, paving the way for future adoption of this practice across the Puget Sound region.

Ultimately, this project will promote sustainable agriculture and build food system resiliency, via:

- improved seawater quality and soil health;
- new skills and practices for land and sea farmers;
- community and partnership-building; and
- a more circular approach to farming that moves excess carbon and nutrients out of the marine environment where they can be harmful, into soils where they're needed.

How will you benefit?

Direct benefits to participating shellfish growers include:

- Support for seaweed harvest and drying (as needed);
- Compensation for seaweed provided to land farms;
- Access to a network of potential land farm customers;
- Potential additional revenue from independent sales of nuisance seaweed 'product';
- Potential marketing opportunities and/or premiums as affiliates of a high-profile USDA sustainable farming program. New marketing opportunities and/or premiums stemming from implementation of a verified sustainable practice; and
- The value of improved shellfish health and seawater quality resulting from seaweed removal.

Other benefits include the opportunity to pilot resilient shellfish farming practices, contribute to regional regenerative solutions, and showcase the innovative spirit of local aquaculture producers.

Next steps and what to expect

If you are interested in being considered for participation in this project, please complete the form on the [BCGF project page](#). A team member will contact you within two weeks and schedule a virtual meeting to gather information about your shellfish farm (part of our screening process), as well as answer any questions you may have about the project, compensation, timeline, etc. You are also welcome to drop into our monthly virtual 'Seaweed Office Hours' from 8-9am on the last Thursday of every month, for informal Q&A about the project (see Washington Sea Grant's [events page](#) for details).

Thank you for your interest in this project!

Blue Carbon Green Field Project Partners include:

