

# SEA LAND

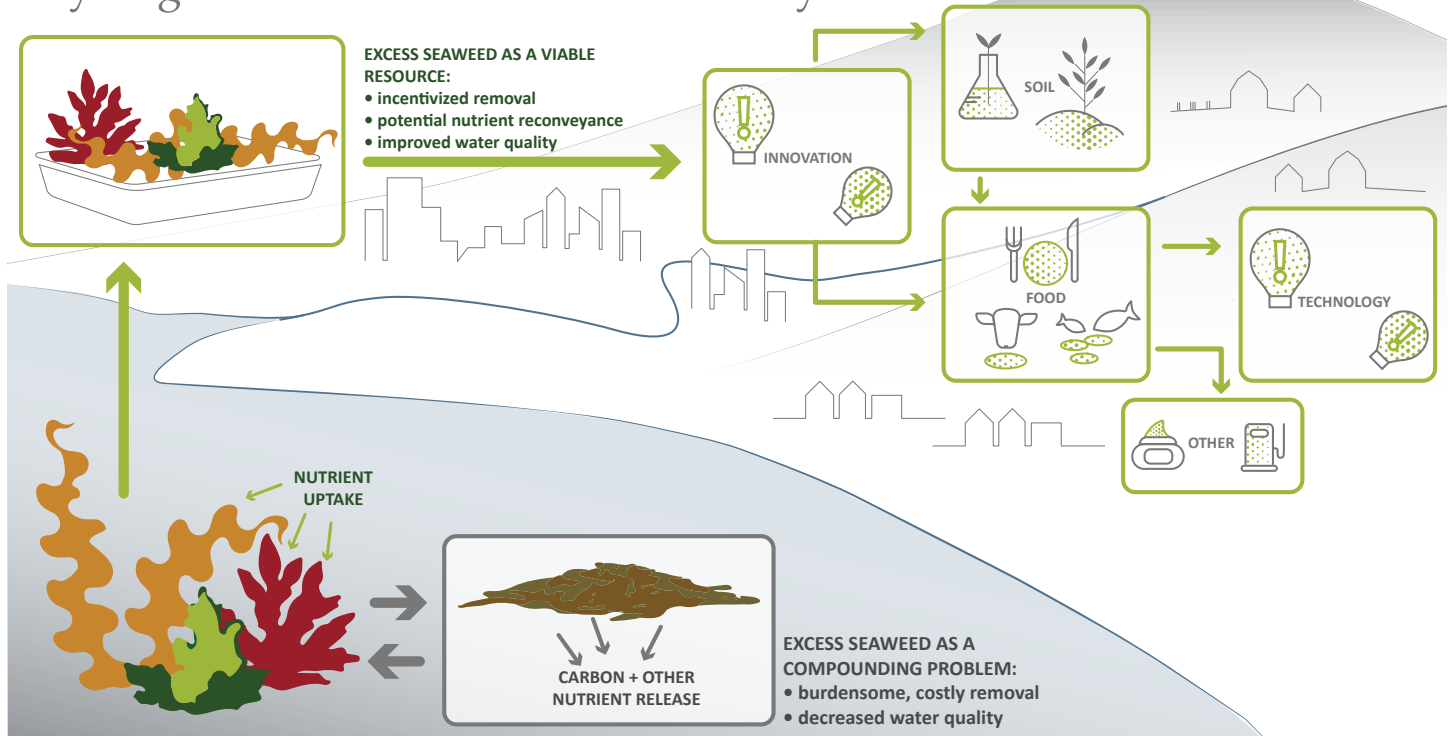
## seaweed solutions:

### Recycling Seaweed into Sustainable Pathways

Intertidal shellfish operations in Puget Sound can be burdened by native seaweed that accumulates on cultivation gear throughout the growing season, oftentimes suffocating clams, oysters and other farmed shellfish. Seaweeds, including sea lettuce, grow quickly and abundantly during warm months, fueled by nutrients from upland sources, the ocean, and nutrients excreted by the shellfish themselves. While these seaweeds absorb carbon and nitrogen and initially provide food and habitat for marine organisms, they also decompose, releasing the nutrients back into the environment. This can then contribute to the degradation of local water quality. Specifically, the decomposition process creates a marine environment that is less oxygenated and more acidic (from the increase of CO<sup>2</sup> in the water), which can negatively impact growth and survival of young shellfish.

*So why not turn lemons into lemonade?* This same burdensome seaweed is a potential resource for a burgeoning market of seaweed-based products, and a possible pathway for reconveying nutrients in the form of seaweed back up into the terrestrial environment. With generous funding from [NOAA's Saltonstall-Kennedy Program](#) and [The Builders Initiative](#), Puget Sound Restoration Fund (PSRF) is leading a two-year pilot project to develop test systems and markets for transforming excess seaweed from a burden into a viable, beneficial resource. While solving a here-and-now problem for intertidal shellfish growers, the project explores the potential for renewing sea-to-land nutrient flows in response to actions identified by the [Blue Ribbon Panel](#) (BRP) to help mitigate Ocean Acidification (OA).

### Recycling Seaweed into Sustainable Pathways



In partnership with our 3 participating shellfish growers, we're getting our hands dirty and crafting solutions with invaluable insight and collaboration from those who are directly impacted. Working shellfish farms bring years of know-how and innovation to the task, along with a dedication to

sustainable fisheries and healthy coastal ecosystems. Our partners are:

- **Chuckanut Shellfish**
- **Calm Cove Oyster Co.**
- **Baywater Shellfish**

## Project Aims:

### INVESTIGATE

In this field-based study, we will estimate the amount of harvestable seaweed, and assess the ecological impacts of fouling seaweed and its removal, at our three participating shellfish farm operations.

### CONNECT

We will identify a network of agricultural or other land-based operations, market channels and/or supply chains as users for harvested seaweed that burdens aquaculture gear and shellfish operations throughout the growing season.

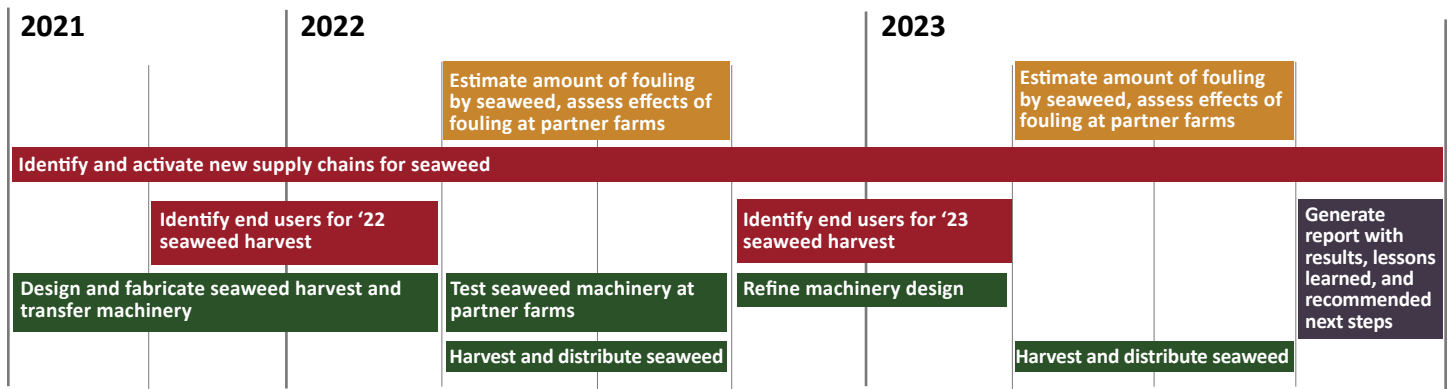
### RE-CONVEY

We will design and test seaweed harvest methodologies to unburden farmers and open pathways for sustainable re-use. Removing excess seaweed and transferring it to upland areas, or using it in other land-based operations, has the potential to help renew lost nutrient connections in marine terrestrial systems.

### SCALE

Ultimately, the project aims to demonstrate a scalable strategy for developing more resilient shellfish farms regionally - ones with diversified products, markets, and income streams - and to find opportunities for innovative business models and/or services that could be provided to existing growers or new entrants.

## Project Schedule:



To follow along with the project, subscribe to PSRF's newsletter [here](#).

**Please get in touch!** We encourage you to reach out about your brilliant ideas for seaweed use or a potential market pathway. We'd love to connect and collaborate with you. Contact project managers Emily Buckner ([emily@restorationfund.org](mailto:emily@restorationfund.org)) and/or Hannah Garfield ([hannah@restorationfund.org](mailto:hannah@restorationfund.org))

