

Developing Community Guidelines for Sustainable Management of SAV and Shellfish



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HB 3114-OOST Project 5 (2022-2024)

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Project Goal

Gather community input and the best available science to develop a guidance document for the sustainable co-management of SAV (seagrass and macroalgae) and shellfish (farmed and wild) in the State of Oregon.

	<i>Environmental</i>	<i>Management</i>
+	<ul style="list-style-type: none">- Disease reduction- Support diverse species assemblages- Water filtration- OA amelioration via eelgrass metabolism	<ul style="list-style-type: none">- Shellfish equipment as protection for eelgrass desiccation- Favorable impacts on hydrodynamics
-	<ul style="list-style-type: none">- Light reduction- Sulfide accumulation in sediment	<ul style="list-style-type: none">- Direct eelgrass physical impacts due to shellfish harvest- Shading



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Outcomes and Products

1. A State guidance document based on community input + state of the science
1. A community workshop designed to share the state of the science, discuss current management practices and regulations, and collect input on future co-management of shellfish and SAV

Survey: Shellfish & Submerged Aquatic Vegetation (SAV) in Oregon

The purposes of this form are to: 1) collect participant information (which will be de-identified and kept confidential); and 2) evaluate participant understanding and perceptions of shellfish and SAV.

Project Title:

Science-based best practices for co-management of Oregon submerged aquatic vegetation (SAV) and shellfish

Project Description:

This project aims to develop best practices that guide effective co-management of submerged aquatic vegetation (SAV, e.g. seagrass and seaweed) habitats and shellfish (e.g. oysters, clams, and mussels) in Oregon based on the best available science and incorporate a diversity of stakeholder and rights holder needs and goals.

We will address the following questions through literature review, surveys, workshops, and targeted outreach:

1. What are the environmental interactions between shellfish and SAV (with a focus on the Pacific Northwest), and what scientific gaps exist?
2. How do shellfish and SAV interact within Oregon's regulatory and management landscape, and how does this inform or impact their co-management?
3. How does each stakeholder and rights holder group perceive and envision co-management of shellfish and SAV, and how do these visions differ between groups?



Community input solicited via survey:

<https://forms.gle/jAve6VbEbSYNp6C46>



Grower Perceptions

“We have locations where we have planted oysters and the eelgrass comes in...We have even seen areas where we have removed shellfish gear due to permitting and seen a reduction in the amount of eelgrass.”

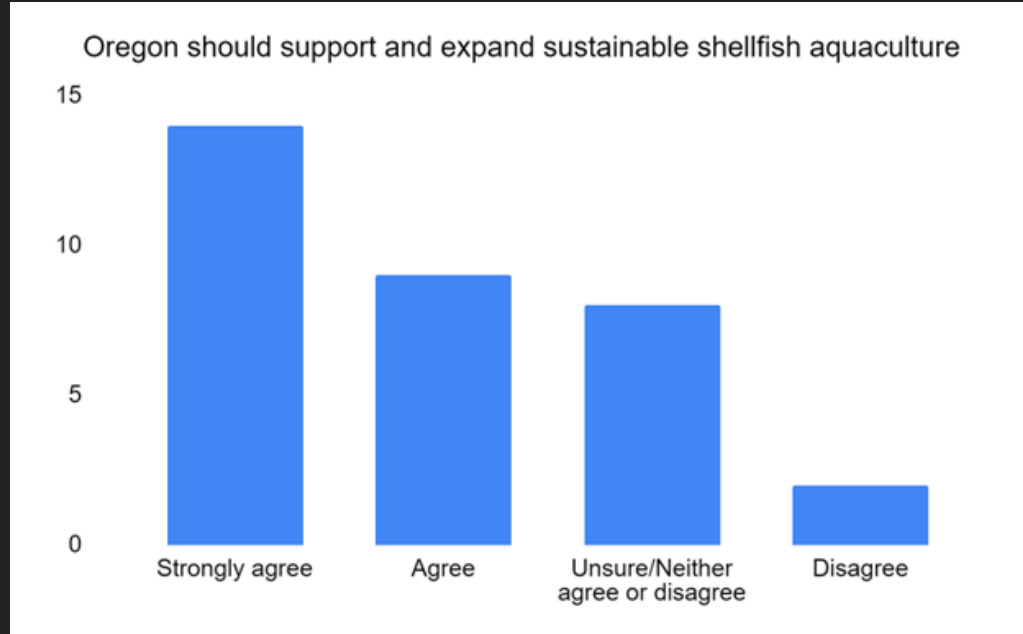
“If a farm is asked to have no impact on SAV and a negative change is seen, what was the result from? If burrowing shrimp move into an area and oysters and eelgrass are displaced is it the grower that would be held liable? The environment is dynamic and there are significant changes in eelgrass and burrowing shrimp on an annual and seasonal basis.””

“The positive impacts of oyster farming and the negative impacts of other environmental factors on SAV are not evaluated in the same way during a permitting process as the potential adverse impacts oyster cultivation may or may not have.”

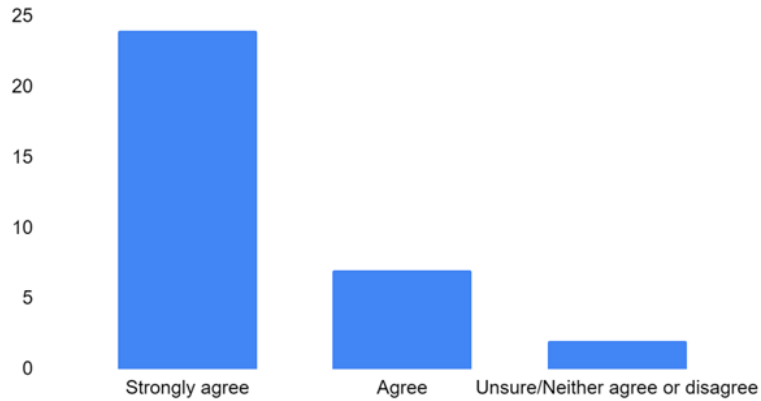
“In general [co-management is hurt by] the ‘either/or mentality’ rather than seeking ‘and.’”

Preliminary Survey Results

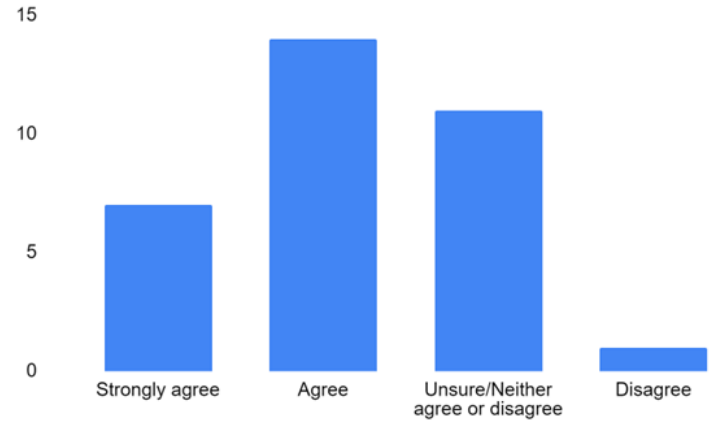
- Respondents (n=33):
 - Academics/Researchers (n=19)
 - Natural resource managers (n=13)
 - Recreational harvesters (n=8)
 - SAV restoration practitioner (n=6)
 - Commercial growers (n=5)
 - Advocates/NGOs (n=4)



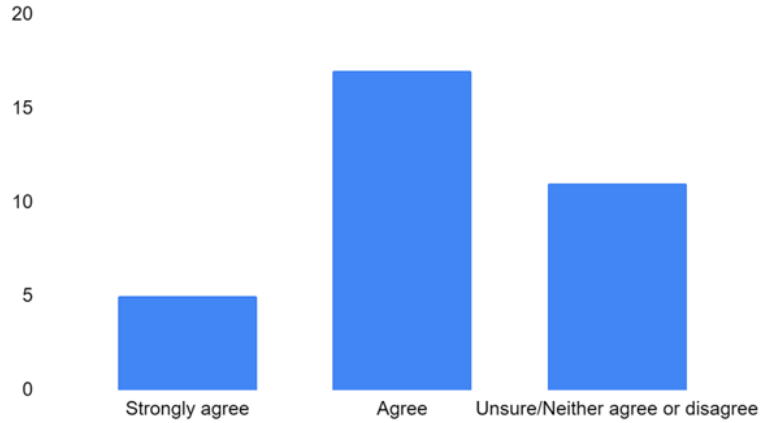
Ocean acidification and hypoxia (OAH) pose a threat to farmed and native shellfish



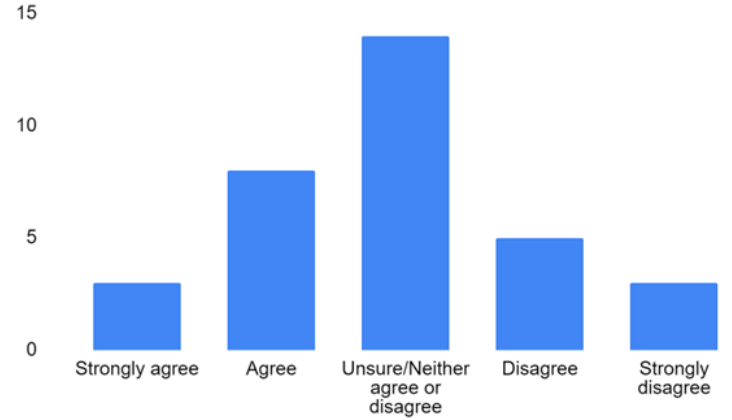
SAV can lessen the impacts of OAH on farmed and native shellfish

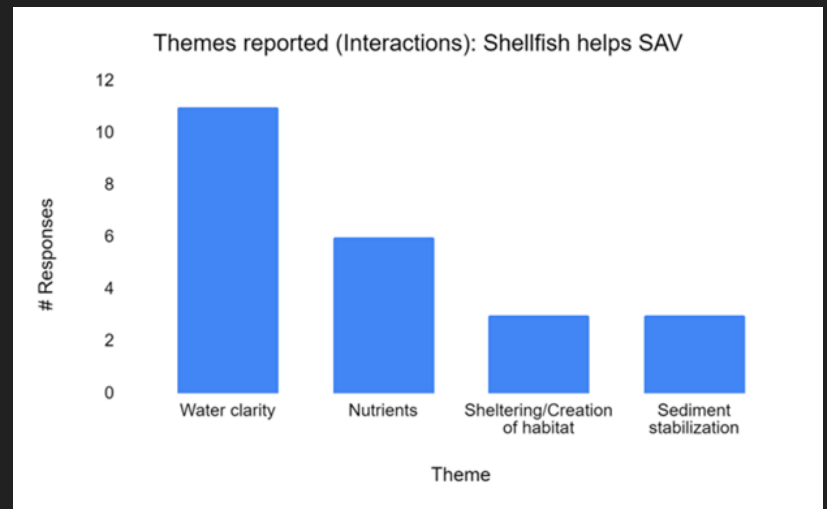
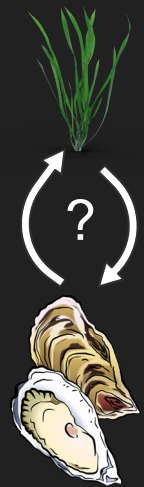
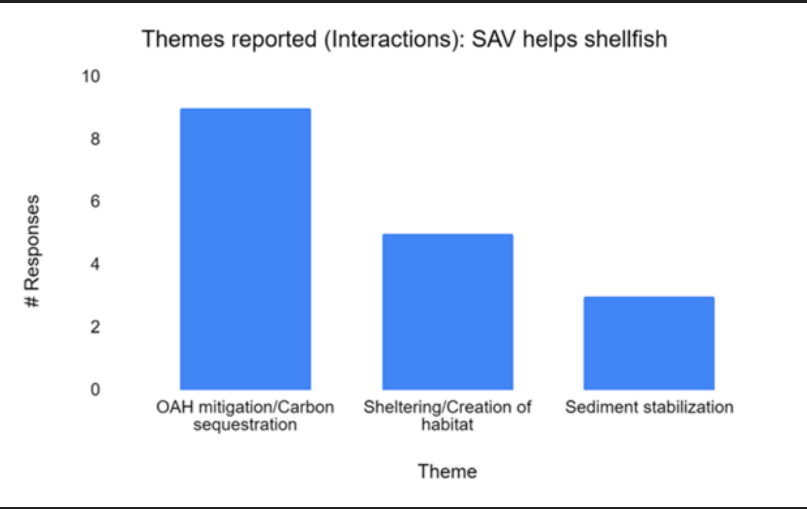


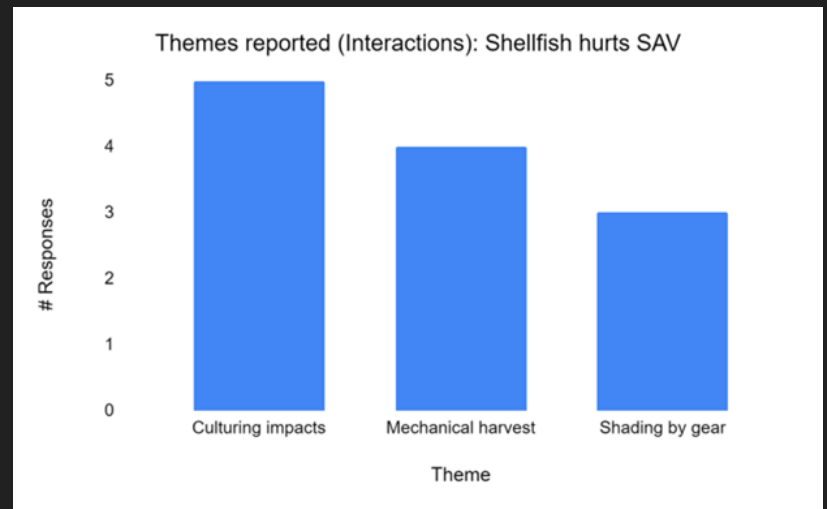
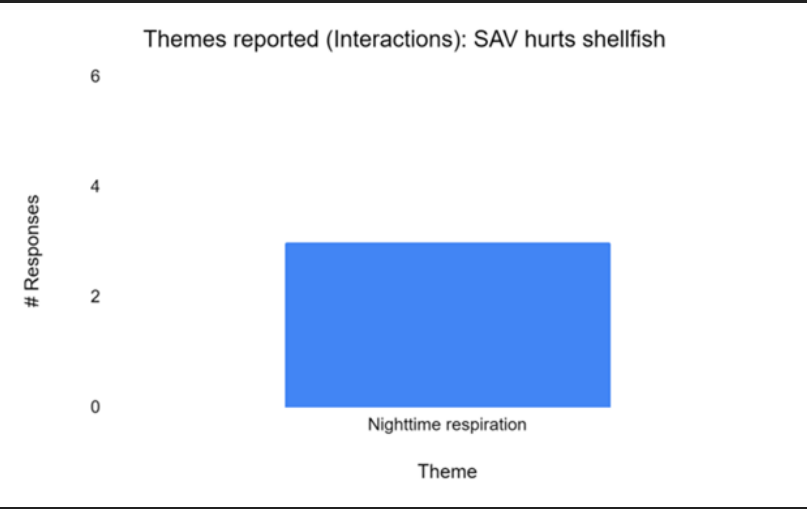
Co-location of SAV and farmed shellfish can benefit farmed shellfish

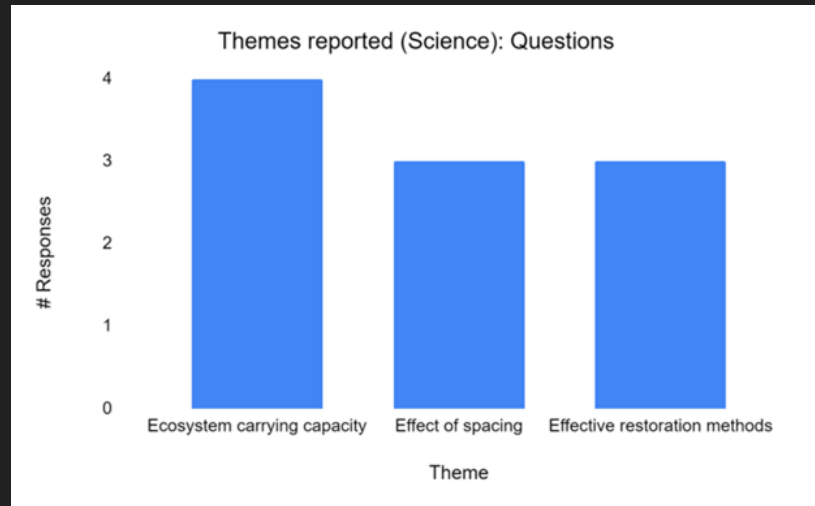
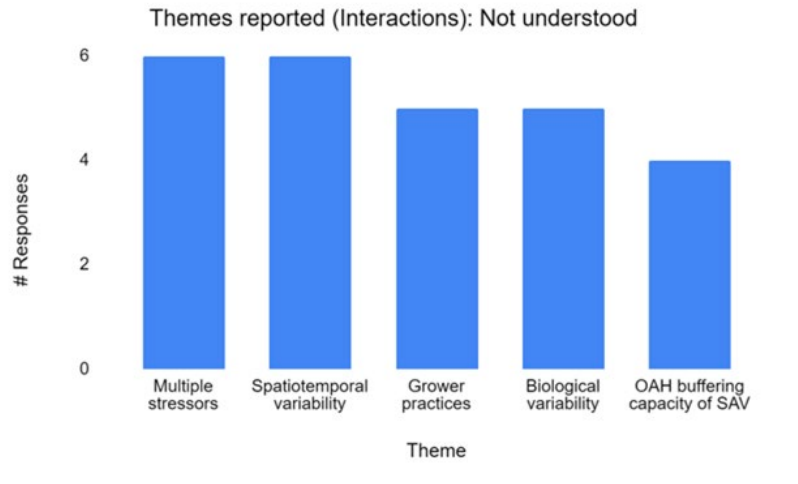


Co-location of SAV and farmed shellfish can benefit SAV

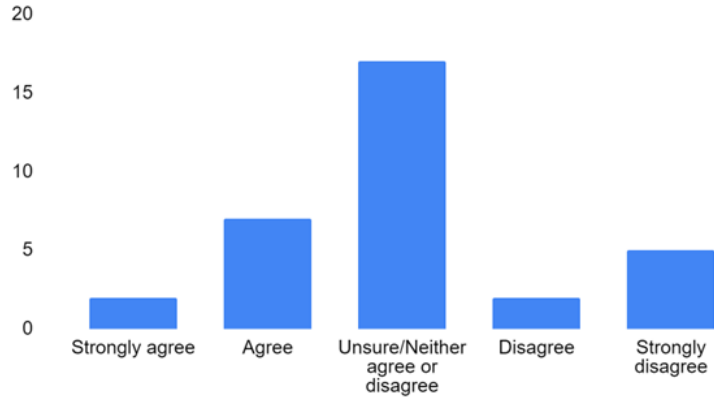




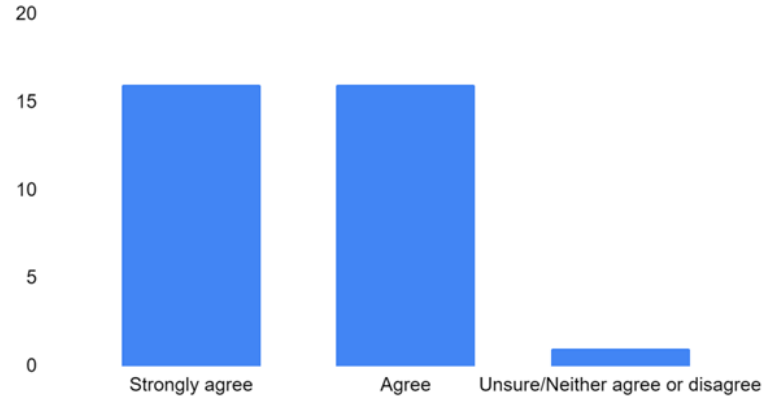


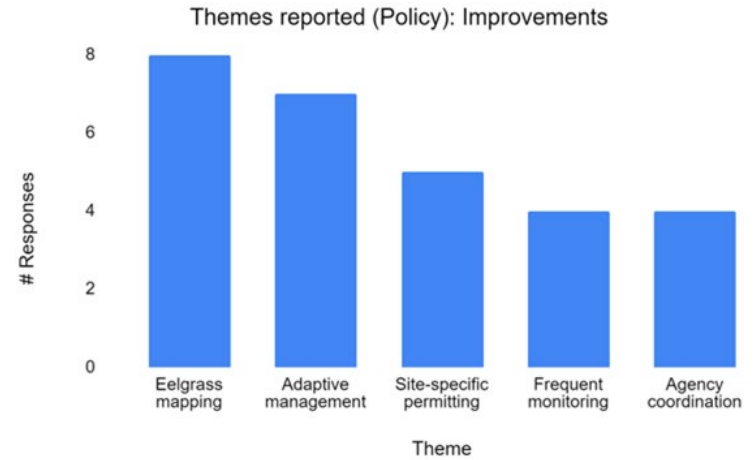
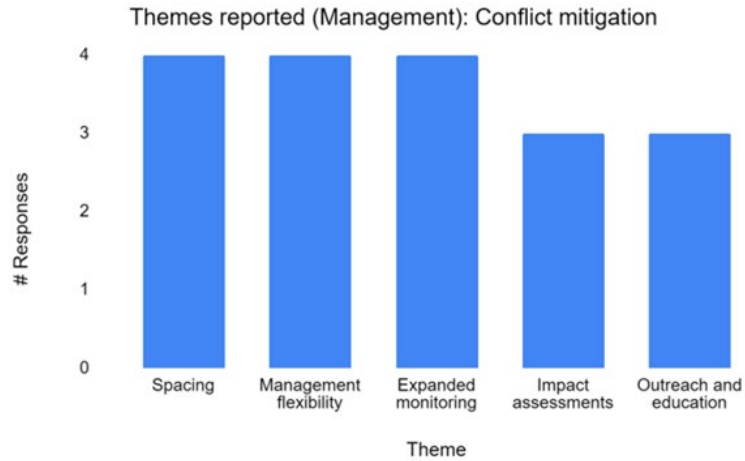


Oregon should permit shellfish aquaculture to occur up to the edge of SAV populations



Some methods of shellfish harvest are more detrimental to SAV than others

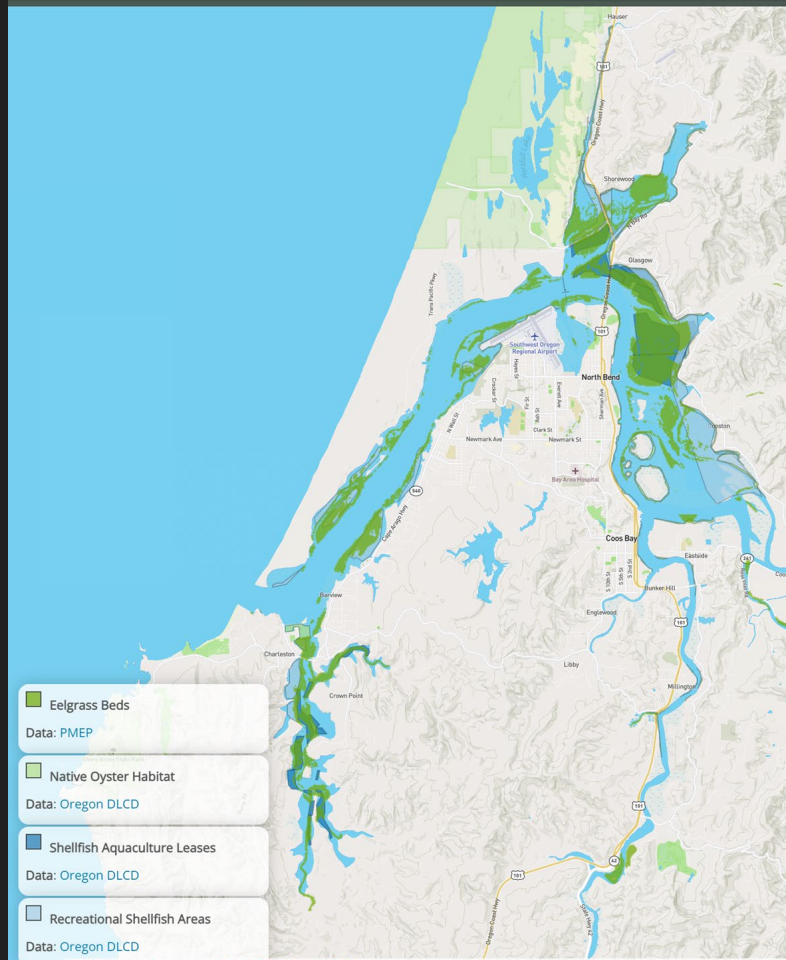




Outcomes and Products

3. A data visualization tool
 - View spatial interactions between shellfish and SAV
 - Coming soon: view survey results by location and user group

Shellfish and Submerged Aquatic Vegetation (SAV) Map: Oregon



Save the Date

- Workshop on Jan 24, 2024 at HMSC

RSVP here:

<https://forms.gle/BEAivM4YdZf7rKnS8>

