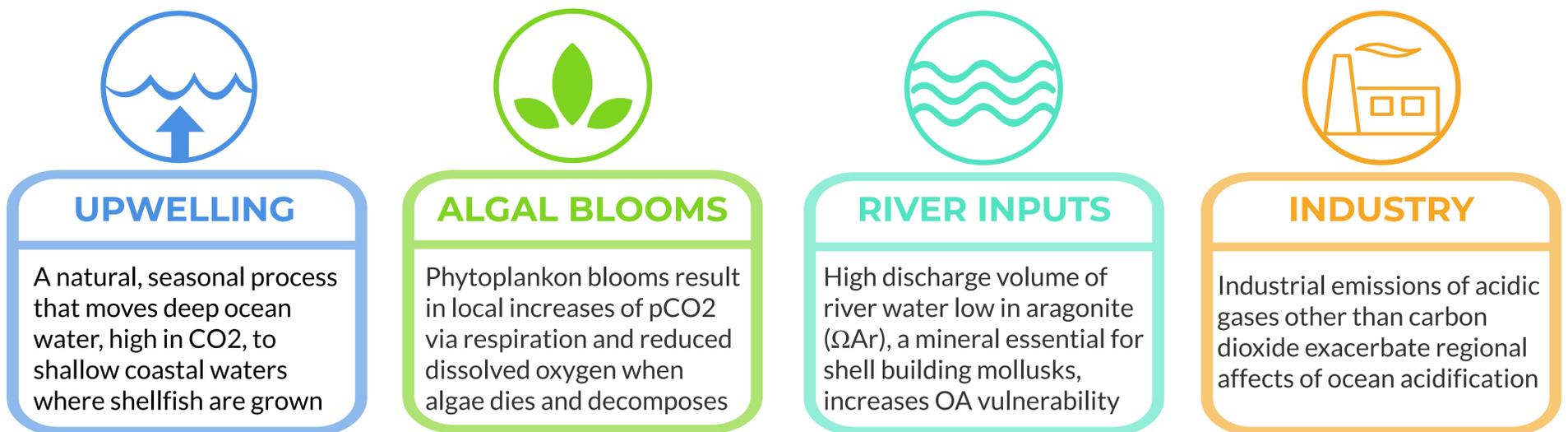


Creating Climate Resilient Communities

Adapting to Ocean Acidification: Pacific Northwest Shellfisheries

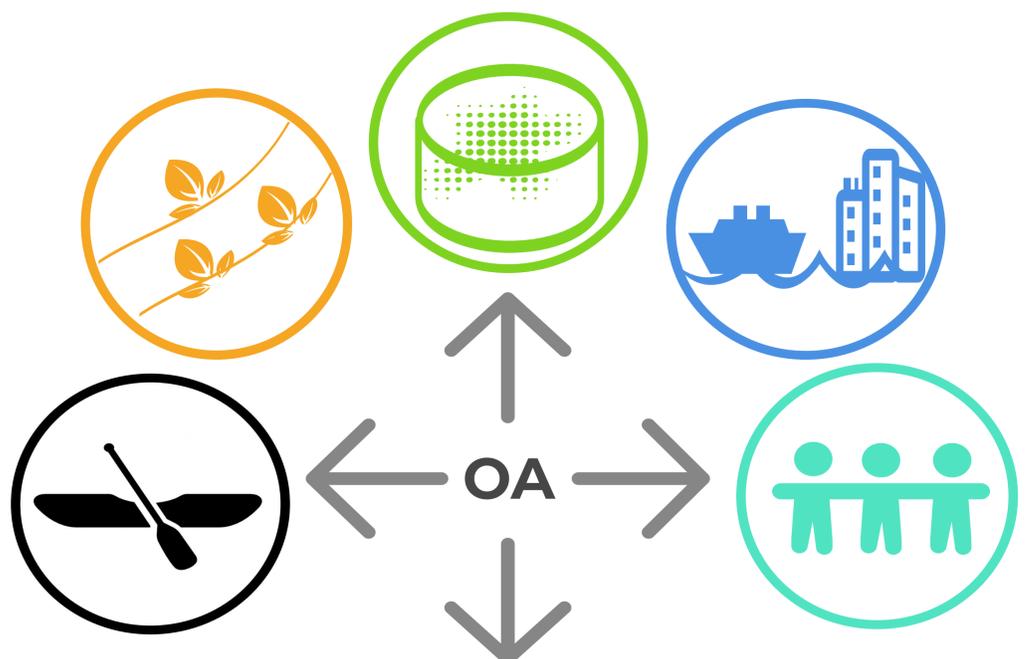
Pacific Northwest marine waters are particularly vulnerable to ocean acidification due to rising atmospheric CO₂ and regional additive stressors from natural and human-driven sources:



Research scientists from Oregon State University and Pacific Shellfish Institute received \$300,000 from NOAA's Ocean Acidification Program to aid shellfish communities in Washington and Oregon adapt to OA

Project Goals:

-  Identify most vulnerable stakeholders
-  Determine cost of OA adaptation for each group
-  Model adaptation pathways based on stakeholder input
-  Identify barriers and limitations to adaptation
-  Predict the total socio-economic impact of ocean acidification



1. Coastal Tribes

Ocean acidification threatens the wild and commercial harvest of shellfish that are integral to the culture, identities and livelihoods of tribal communities.

2. Shellfish Growers

Shellfish aquaculture is valued at \$270 M annually in the US Pacific Northwest. OA has already cost the industry \$110M, jeopardizing more than 3,200 jobs.¹

3. Shellfish Hatcheries

Pacific oyster seed shortages from '05 - '09 correlated with upwelled, CO₂-enriched waters, causing nearly 80% larval mortality at hatcheries² and a 22% decline in production across the industry.³

4. Port Towns

Tourism from recreational shellfish harvesting brings in \$27M annually in WA state alone, a critical driver of coastal and Puget Sound economies.⁴

5. Employees

The shellfish industry is often the leading employer in rural, coastal communities directly and indirectly supporting thousands of jobs in these regions.

1. Washington Shellfish Initiative white paper, December 2011

2. Washington State Blue Ribbon Panel Report on Ocean Acidification 2012

3. Pacific Coast Shellfish Growers Association, 2011

4. Washington Dept. of Fish and Wildlife (WDFW)