

Ocean Acidification in Pacific Northwest Fisheries and Aquaculture: Adapting to changing ocean conditions and building resilience



Benjamin Drummond / bdsjs.com

Understanding Ocean Acidification

Our oceans absorb carbon dioxide from the atmosphere, resulting in a change in water chemistry that results in increasing acidity. These conditions can impact growth, behavior, and survival of marine life.

Some fisheries and aquaculture that may be at risk now.

Examples:

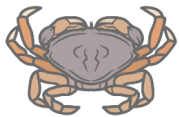


Average Total Commercial Landing Value

*Does not include reporting from Indigenous entities

Pacific Salmon

\$39 million CAD¹
\$26 million USD²



Dungeness Crab

\$89 million CAD¹
\$175 million USD²



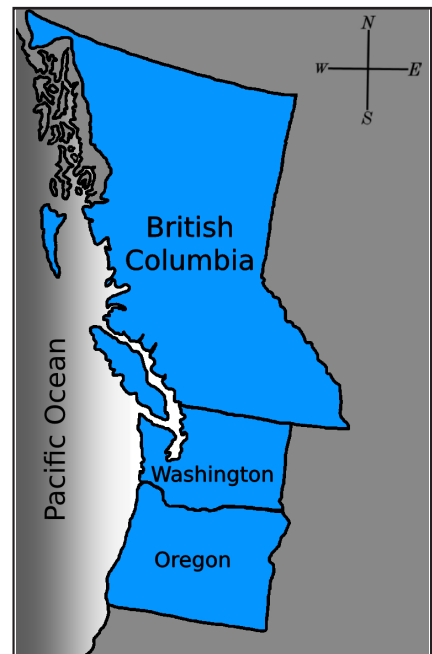
Pacific Oysters

\$38 million USD²

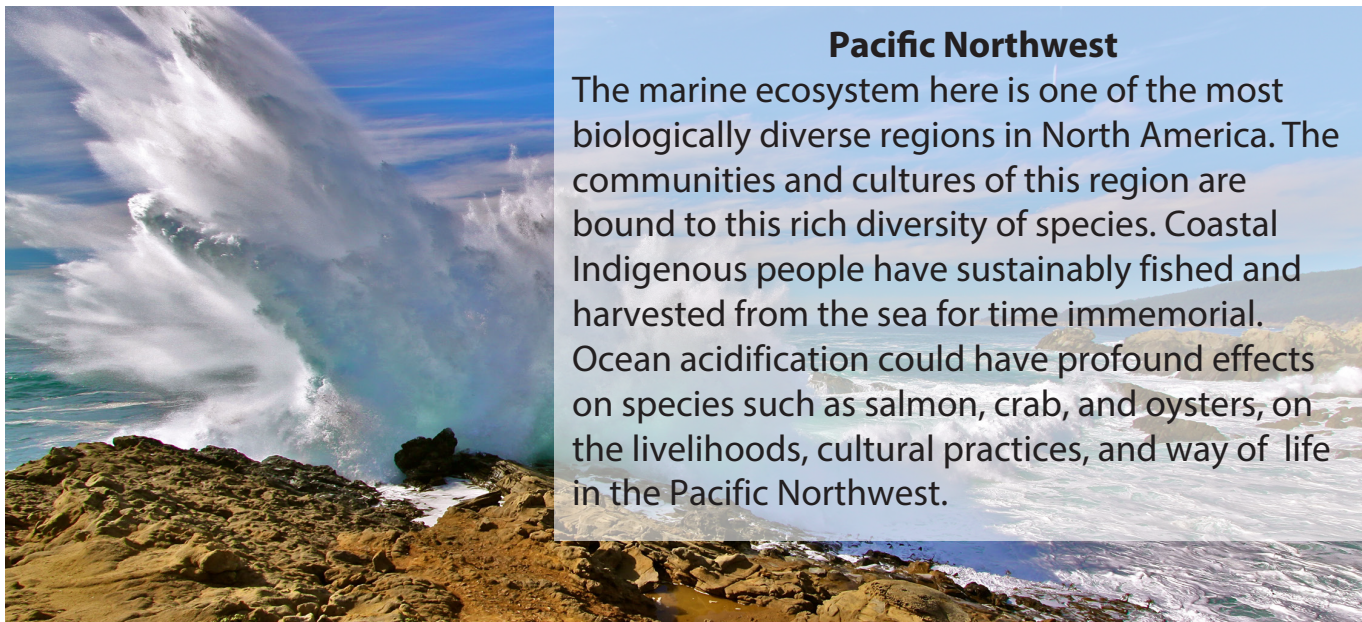


Clams

\$48 million CAD¹



Commercial, recreational, and Indigenous fisheries support our way of life and the regional economy. Knowing how these fisheries are at risk helps us prepare for the impacts of changing ocean conditions.



Pacific Northwest

The marine ecosystem here is one of the most biologically diverse regions in North America. The communities and cultures of this region are bound to this rich diversity of species. Coastal Indigenous people have sustainably fished and harvested from the sea for time immemorial. Ocean acidification could have profound effects on species such as salmon, crab, and oysters, on the livelihoods, cultural practices, and way of life in the Pacific Northwest.



Ocean acidification limits minerals that are building blocks for shell builders like oysters, clams, and other species sensitive to acidifying waters.



Monitoring our ocean lets us track and predict ocean acidification. The more we know, the better we can prepare for changing ocean conditions.



Understanding the biological responses to acidification can help fishermen and aquaculturists make informed decisions that build resilience.



Examining community vulnerability to ocean acidification by monitoring risks is important for understanding socioeconomic and cultural impacts.

In the Same Boat

Together with a team of local scientists, academics, Tribal community leaders, industry professionals, and policymakers, NOAA and DFO are building collaborative partnerships to support the region. Providing scientific information on where and when acidification occurs, future impacts to valuable species, and the associated risks to resource-dependent communities in the region. Through this partnership, actions meet local needs and priorities. Fishing and aquaculture communities will be better prepared to adapt to our changing ocean.



<https://www.oceanacidification.ca/>



<https://oceanacidification.noaa.gov/>

¹ <https://www.dfo-mpo.gc.ca/stats/commercial/sea-maritimes-eng.htm>

² <https://www.fisheries.noaa.gov/foss/f?p=215:200:14412789929288:Mail:::>