



Understanding the impact of ocean acidification on tribal communities, cultures, and economies in the Pacific Northwest



The cultural significance of local marine life

The Pacific Northwest boasts an abundance of marine life to which communities and cultures are inextricably linked. Native tribes such as the Quileute, Hoh, and Makah, and the Quinault Indian Nation, have fished and harvested from the sea for thousands of years. The effects of ocean acidification on marine species such as salmon, clams, and crab could have profound impact to communities and their way of life. The tribes depend not only on these species for food, but also economic income, family and community events, as well as spiritually and cultural identity.

With ocean acidification, however, clams and other marine animals have a harder time growing their shells, and many fish begin to behave unnaturally as the higher acidity affects their ability to detect predators and prey. The protection of these fish and shellfish from ocean acidification implies a healthier environment, which in turn leads to the preservation of health, subsistence, economic security, and culture.

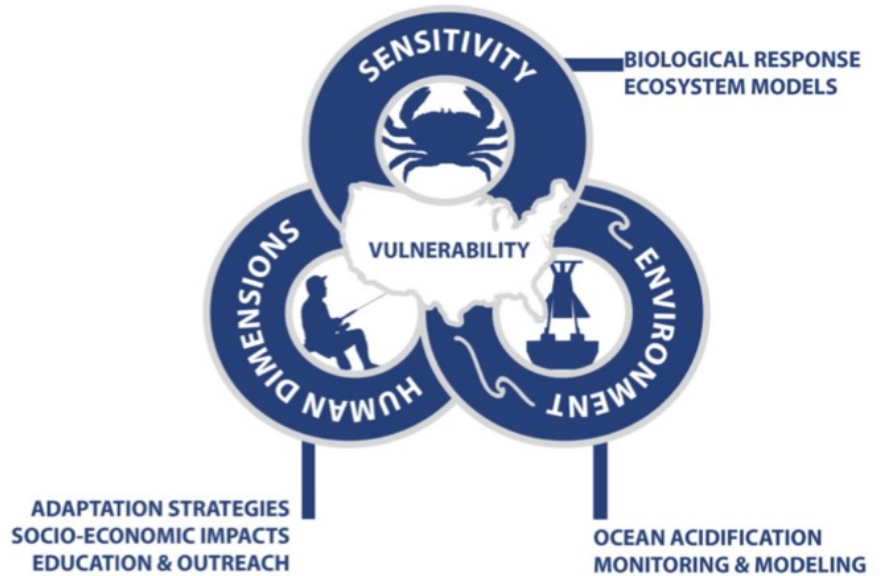
What is Ocean Acidification?

Ocean acidification is the process in which carbon dioxide is absorbed by our ocean, generating a chemical reaction that increases the water's acidity. This increase in acidity can make it more challenging for creatures like the razor clam to build their exterior shells.

NOAA OAP's approach to building resilient communities

In the Pacific Northwest, a team of academic, NOAA, tribal, and local scientists are working together with tribal community leaders and participants in order to better understand how our ocean's chemistry is changing, and how these changes affect human communities.

Working in partnership with tribes and communities, actions can be aligned to local needs, priorities, and capacities.



By providing local tribes, fisheries, managers, policy makers, and other decision makers with information on changing marine resources and human dimension - including, where and when acidification is currently or may in the future impact species the most, and risk of these effects to resource dependent communities - the region will be better equipped to use this information to adapt.

“If we got the community to think realistically about alternatives or adaptations that could be made during a time of change, that would be a success to get folks ahead of the curve”
- Rebekah Monette: Makah Tribe, Historic Preservation Office Program Manager