Oregon's Coordinating Council on
Ocean Acidification and Hypoxia

Species Spotlight

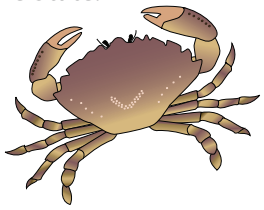
Dungeness Crab

Ocean Acidification (OA) and Hypoxia (H) are harmful to ocean life and the economic stability of the Oregonians who rely on a healthy ocean. The Dungeness crab fishery is one of Oregon's highest harvest values commercial fisheries, and is an iconic pastime for recreational harvesters.

What is at risk?

Economic Effects

Overall declines in harvest levels, resulting in possible economic and recreational losses throughout the State.



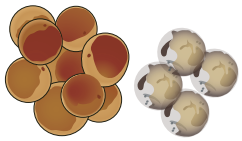
Foodweb Effects

Declines in food (such as clams and mussels) affect crab health.

Habitat Effects

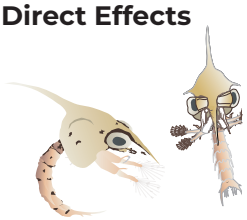
Eelgrass is an important habitat for crabs, and may buffer short term effects of OAH through photosynthesis (absorbing CO_2 and releasing oxygen).

Cumulative Effects



Poor ocean conditions are likely to lead to lower productivity.

Direct Effects



Larval growth and shell formation out of chitin (a calcium carbonate compound) can also be affected by lower acidity.

Sensory Effects

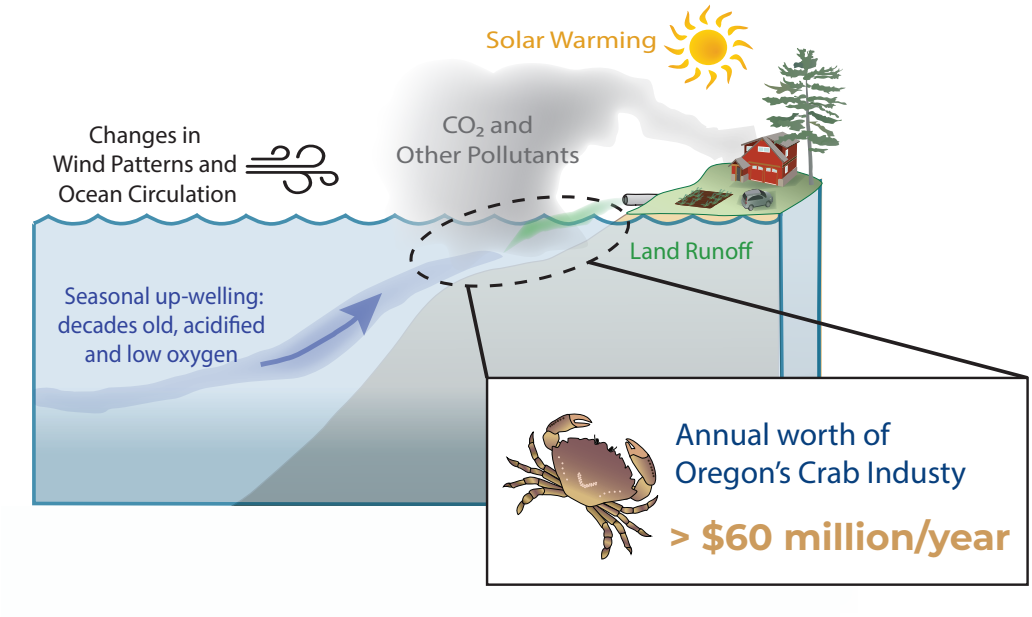
Behavior maybe affected by changing cues, due to altered chemical signaling (peptide production) needed for juvenile settlement.

What is OAH?

Ocean acidification and hypoxia (OAH) are increasing, and are related to the same factor that is causing climate change.

The culprit? **Fossil fuel combustion and related accumulation of CO_2 and other greenhouse gases.**

The solution? **Local actions will lead to a brighter future, for the oceans, its species and the communities that depend on them. We can and must act now!**



The earth's oceans have absorbed 30% of the excess CO_2 produced from fossil fuel combustion since the Industrial Revolution (mid 1800s). When absorbed by seawater, CO_2 undergoes chemical reactions that lower seawater pH (making it more acidic), and thus hampers shell formation in marine life. Hypoxia (low oxygen) conditions are also on the rise as a result of climate change, due to changing wind and weather patterns. This is leading to extended periods of hypoxia in some of Oregon's coastal waters, impacting a wide range of marine animals from crabs to fish.

Support Action!

Ocean Acidification and Hypoxia (OAH) will not stop on its own, and actions must be taken by regional and national governments, communities, and scientists now in order to address the growing problems. Through coordination and collaboration, such as through the **Oregon OAH Action Plan**, Oregon will be able to adapt and mitigate the effects of OAH. Solutions are needed to help Oregon's wild fisheries and marine resources withstand the projected changes in OAH.

To learn more about OAH science, impacts, and solutions, please visit the Oregon OAH Council's website:

oregonocean.info/index.php/ocean-acidification