

# ACIDIFICATION IN ALASKA

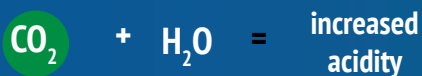
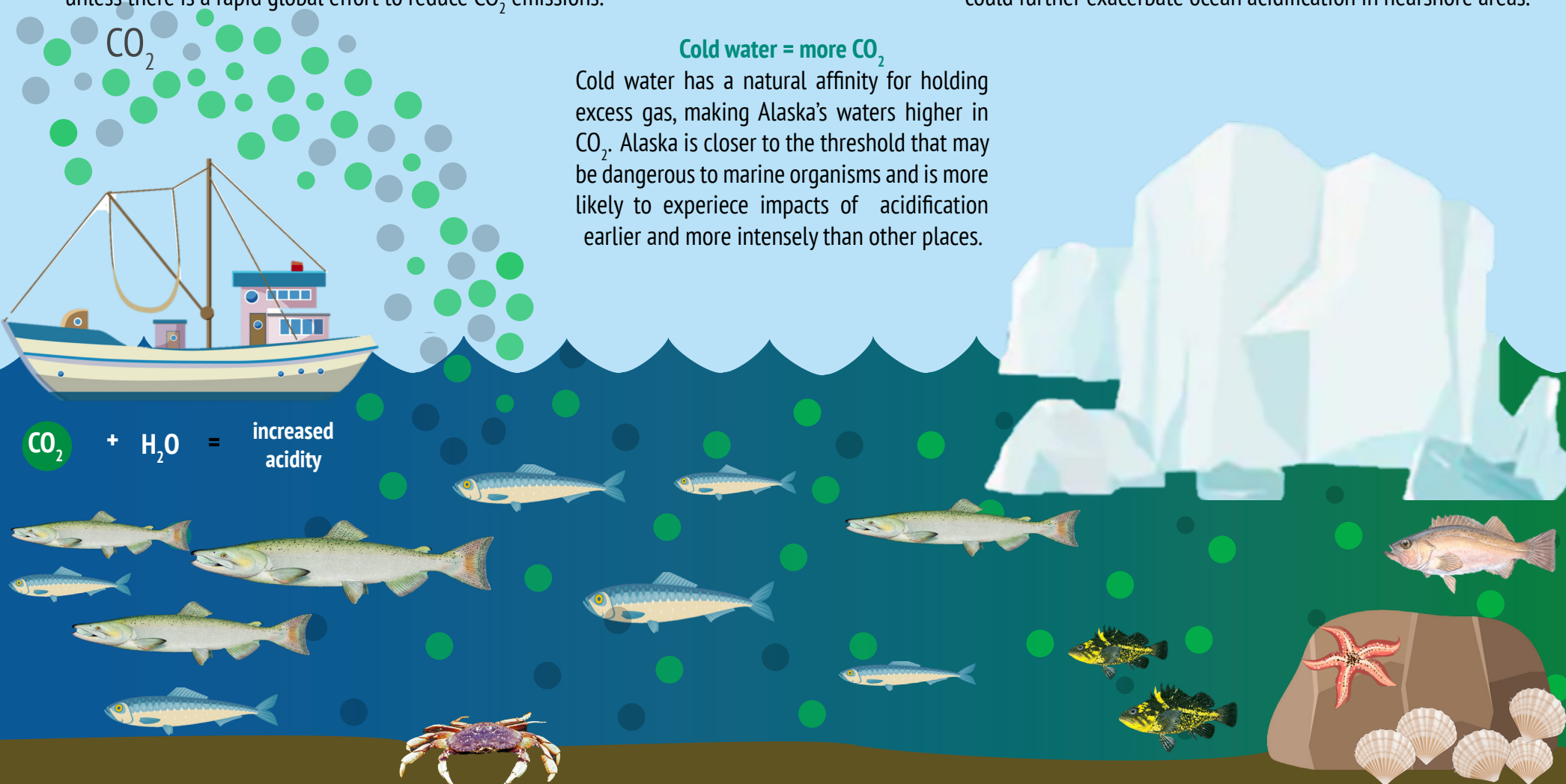


**Ocean acidification:** Our ocean absorbs the excess carbon dioxide we emit when we burn fossil fuels, such as coal, oil, and natural gas for energy to power cars, boats, planes, and create electricity. This changes the chemistry of the water and increases acidity. The process, known as ocean acidification, is happening globally and is expected to continue unless there is a rapid global effort to reduce CO<sub>2</sub> emissions.

**Freshwater influence:** Freshwater naturally increases the acidity of seawater in the nearshore because it is usually low in alkalinity (the buffering capacity of water to resist changes in pH). Areas near glacial outflow are often higher in acidity because the seawater has been diluted by freshwater. As melt rate increases, additional freshwater could further exacerbate ocean acidification in nearshore areas.

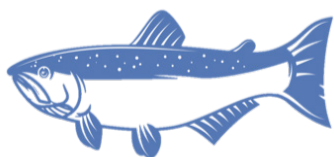
## Cold water = more CO<sub>2</sub>

Cold water has a natural affinity for holding excess gas, making Alaska's waters higher in CO<sub>2</sub>. Alaska is closer to the threshold that may be dangerous to marine organisms and is more likely to experience impacts of acidification earlier and more intensely than other places.



Many marine species are sensitive to a change in pH. Lab studies show some shell-building organisms like crab and clams have a harder time growing shells and/or reproducing in more acidic conditions. Research indicates that more acidic water can also change the growth and behavior of fish.

Humans and marine organisms rely on shellfish and other at-risk species for food or shelter, and changing ocean chemistry can affect the entire ecosystem. Scientists are working to better understand the impacts of ocean acidification to adapt better management practices under changing conditions.



Eat and buy local seafood to support local fishers, and reduce transportation and production emissions.



Reduce energy use by choosing energy efficient appliances and learn about green initiatives in your community.



Support local policies and initiatives that promote conservation, community solutions, and green energy.



Stay informed and take care of your local environment. Healthy ecosystems are more resilient!