

Alaska

Marine Issues for Alaska's People

Seas & Coasts

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Changing Climate Changing Alaska's Fisheries?

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Alaska is bordered by some of the world's richest waters, supporting thousands of marine mammals, millions of seabirds, and trillions of fish and shellfish. More than half of the total U.S. commercial fishery landings come from the waters off Alaska, seven of the nation's top 20 seafood ports are located here, as is the world's largest fishery (pollock) and largest salmon (sockeye) fishery. In some Alaska locations, subsistence users consume more than 200 pounds per person per year of locally harvested fish and shellfish. Alaska's waters provide world-class recreational fishing opportunities.

How will a warming climate impact these resources? Our planet has warmed 1°F since 1900 and may warm an additional 3-10° if CO₂ doubles sometime between 2050 and 2100. Warmer water means fish, which are dependent on favorable temperatures, must move. Some fishing communities that rely on these resources may suffer, while others may find new opportunities. Are our fishery management systems flexible enough to respond to major changes in ranges of fish and shellfish?

Even more threatening are the millions of tons of CO₂ that are absorbed into the ocean every day, reacting with seawater to produce carbonic acid. Ocean acidification can destroy the shells of zooplankton—the backbone of the entire marine ecosystem—as well as crabs and other shellfish.

Understanding, anticipating, and predicting climate change helps fishermen, seafood processors, and fishery managers make choices. Should a fisherman buy permits and/or quota? Should processing facilities be sited and built? Should a new area be opened to fishing?

Those in the fishing and the seafood industry, whose lives depend on a healthy ocean, have good reason to urge that human-caused carbon emissions be reduced. But our credibility in this demand depends on our taking the first step in reducing our own carbon footprint on the environment. How we do that, and how fast, is contingent upon our willpower to change the way we do things.