

CLIMATE CHANGE AND COLD WATER FISH

Aquatic ecosystems will be affected by climate change. The distribution of freshwater species is likely to shift northward, with some extinctions of local species likely throughout the southern ranges of these species and expansion in their northern ranges.

Warmer freshwater temperatures and changes in the pattern of flows in spawning rivers could reduce the abundance of species like salmon, trout, and bass.

For example, an 8°F increase in mean annual air temperature is projected to eliminate more than 50 percent of the habitat of brook trout in the southern Appalachian Mountains.

In addition, projected changes in water temperatures, salinity, and currents could affect the growth, survival, reproduction, and distribution of marine fish species and their competitors and predators.

The survival, health, migration, and distribution of many North American marine mammals and sea turtles also are expected to be affected by projected changes in the climate through impacts on their food supply, sea-ice meltdowns, and breeding or nesting habitats.



CLIMATE CHANGE: WHAT MIGHT WE LOSE?

The loss of fishing opportunities due to climate-induced changes in fisheries could be severe in some parts of the country, especially at the southern boundaries of the habitat ranges of cool- and cold-water species.

Although gains in warm-water fishing opportunities may offset overall losses in cold-water fishing opportunities, the potential effects on specific localized regions are cause for concern.

For example, cold water fish habitats could be lost entirely in such states as Maine, Massachusetts, Connecticut, Ohio, and Nebraska. Presently, more than 750,000 people fish for trout in those states each year. How many people would or could switch to a warm water species is uncertain.

What can you do? Help reduce greenhouse gases. Use a more fuel-efficient (or non-motorized!) mode of transportation. Carpool. Purchase electronic devices and appliances with the ENERGY STAR® label. Plant trees. Educate yourself and others about climate impacts. Share research and encourage more of it.

