

Waters off New England had 2nd warmest year on record in '22

February 15 2023, by Patrick Whittle



Lobster fishermen work at sunrise, Thursday, Sept. 8, 2022, off Kennebunkport, Maine. The waters off New England logged the second-warmest year in their recorded history in 2022, according to researchers. The Gulf of Maine, a body of water about the size of Indiana that touches Maine, New Hampshire, Massachusetts and Canada, is warming faster than the vast majority of the world's oceans. Scientists with Gulf of Maine Research Institute say 2022 fell short of setting a new high mark for hottest year in record by less than half a degree Fahrenheit. Credit: AP Photo/Robert F. Bukaty, File

The waters off New England, which are home to rare whales and most of the American lobster fishing industry, logged the second-warmest year on record last year.

The Gulf of Maine, a body of water about the size of Indiana that touches Maine, New Hampshire, Massachusetts and Canada, is warming faster than the vast majority of the world's oceans. Last year fell short of setting a new high mark for hottest year by less than half a degree Fahrenheit, said scientists with the Gulf of Maine Research Institute, a science center in Portland.

The average sea surface temperature was 53.66 degrees (12 degrees Celsius), more than 3.7 degrees above the 40-year average, the scientists said. The accelerated warming is changing an ecosystem that's host to numerous important commercial fishing industries, especially for lobsters, they said.

One implication is that the warming is driving species more associated with southern waters into the Gulf of Maine and altering its [food chain](#), said Janet Duffy-Anderson, chief scientific officer with the institute.

"Who will be the emergent species and who will be the species that decline is, in large part, a function of those interactions," said Duffy-Anderson. "At the moment, we're not in a period of stability."

The [gulf](#) is the nerve center of the lobster fishing business, which has recorded heavy catches over the past 10 years. However, lobster fisheries in more southern waters have collapsed, and scientists have placed the blame on warming temperatures.

The Gulf of Maine is also a key area for marine mammals such as the

North Atlantic right whale, which numbers only about 340, and sea birds such as Atlantic puffins. Those species and many others are threatened by disruptions in their food supply due to warming waters.

The environmental factors accompanying high temperatures in the Gulf of Maine include persistent, intense heatwaves, according to a report released by Gulf of Maine Research Institute on Wednesday.

The warming is also coming at a time when the world's oceans are heating up. Last year was the third-warmest year for global sea surface temperature, the report said.

"What is being observed in the Gulf of Maine (and elsewhere around the world), however, is a loss of that balance: larger fractions of recent years are experiencing above average temperatures and cold spells are becoming vanishingly rare," the report said.

The hottest year in the Gulf of Maine was 2021, when the average annual sea surface temperature was slightly more than 54 degrees (12.2 degrees Celsius). Last year was a fraction of a percent warmer than the third warmest year, which was 2012.

Those three years are the only ones in recorded history in which the gulf's average temperature exceeded 53 degrees (11.7 degrees Celsius).

The report states that other data also paint a picture of the Gulf of Maine as the site of prolonged warming. In nine of the year's 12 months, the average monthly sea surface temperature was within the top three warmest among all years on record, the report said. November and December both set new records for highest monthly average sea surface temperature in the gulf, it said.

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