

US fishing policy is boosting fish populations, not constraining most fisheries, finds research

May 11 2023



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Commercial fishing employs 1.2 million Americans and generates more than \$165 billion annually. Yet warming waters are [threatening](#) fish

populations and disrupting fisheries around the world—a challenge set to worsen as climate change advances.

Despite the importance of sustaining fisheries, the reauthorization of the cornerstone [policy](#) protecting them in the United States—the Magnuson-Stevens Act—has been stalled in Congress for a decade. The holdup? Some blame the policy for being too stringent and leading to what they call "underfishing," while others argue the policy is not doing enough to rebuild depleted fish populations. Others go so far as to argue that fish populations would have rebounded without any policy.

A pair of studies finds these concerns to be largely unsubstantiated. In analyzing the policy's impact on fish populations, fishing, and industry revenue, they find that it is working essentially as it should. It is rebuilding fish populations, and in most cases it is not unduly holding back fishers from making their catch.

"Many people talk about the need to manage our resources sustainably," says Eyal Frank, a lead author of the studies and an assistant professor at the University of Chicago Harris School of Public Policy. "Too often, this becomes just talk with little evidence that our policies are making a difference. Our studies provide that evidence. Our fishing policy is working, and that is very encouraging news at a time when sustaining our fisheries couldn't be more vital."

Kimberly Oremus, co-lead author of the studies and an assistant professor at the University of Delaware's School of Marine Science and Policy, adds, "With many of the world's fisheries in decline, our findings show that sustainable fishing is possible with the right policies."

In their study published in *Science*, Frank, Oremus and their other co-authors first examine the assertion of critics of U.S. fishing policy that it is too stringent and unnecessarily leaving too many fish in the water.

They find that the main reason about half of the fish stocks considered "underfished" in this way is due to pure economics.

Fishers are not harvesting the fish because there is not enough demand for them. Other healthy fish stocks are being left in the water because they could not be profitably caught without also catching other fish species that are depleted. Just four [fish species](#) make up the majority of the revenue of those "underfished." And, of those, the majority of the revenue came from just one species: the walleye pollock, the catch of which is not constrained by our federal fisheries law.

"If the concern is lost revenue or catch, it would make the most sense to narrow the focus to this small number of high-value stocks, which are constrained for specific reasons that may or may not prove tractable," the researchers write.

In a second study, Frank and Oremus look at a separate criticism of the policy: that it is not doing enough to rebuild fish populations or that fish populations would have rebounded on their own without the policy. They discover the opposite to be true. Fish subject to the policy saw their size increase to be 52.2% larger than those comparable fish in the European Union, where similar fishing policies were not yet in effect.

Comparing U.S. fish populations that were depleted before the rebuilding policy went into effect to U.S. fish populations that were depleted after the policy went into effect, Frank and Oremus find that in the absence of policy the declining fish populations continued to decline by about 45%. But when the policy took effect, it took five to 10 years for the fish population to double in size—recovering to be about 98% greater in size than when it was first threatened.

Frank and Oremus show that the policy clearly leads to long-term gains in the [fish population](#). But how does it impact the industry? The

researchers find that the fish catch and revenue declined in the first years of rebuilding, but then recovered to pre-rebuilding levels or higher within a decade. In fact, the authors report results that suggest that in the 10 to 15 years after being subject to the rebuilding efforts, the size of the catch for fish populations that had fully recovered was 51.9% higher than that of equivalent fish stocks in the EU.

"We hope these studies provide useful evidence for policymakers that science-based management of biological resources actually works," Oremus says.

More information: Kimberly L. Oremus, Underfished or Unwanted?, *Science* (2023). DOI: [10.1126/science.adf5595](https://doi.org/10.1126/science.adf5595).
www.science.org/doi/10.1126/science.adf5595

Provided by University of Chicago

Citation: US fishing policy is boosting fish populations, not constraining most fisheries, finds research (2023, May 11) retrieved 24 April 2024 from <https://phys.org/news/2023-05-fishing-policy-boosting-fish-populations.html>

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