

## RESEARCH HIGHLIGHTS

# Underfished or Unwanted? Much blame cast upon fisheries policy may be misguided

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Is US fishery regulation too conservative, leading to “underfishing”?

### Context

The benchmark fishing law in the United States, the 1973 Magnuson-Stevens Act, aims to sustainably manage marine fisheries to prevent overfishing and rebuild overfished stocks. Since the law was reauthorized in 1996 with scientifically based management requirements, however, policymakers, scientists and industry groups have begun to question whether it is too stringent and has led in the United States to what has been labeled “underfishing.” Some have claimed such underutilization has led to a potential yield loss of as much as 48 percent. A debate blaming fishery regulation for yield losses could pressure lawmakers to change US fisheries policy and dissuade other countries from adopting similar frameworks. In 2015, 193 countries committed to integrate sustainable fishing policies into their national laws as part of their commitment to the United Nations Sustainable Development Goals.

### Methods

The authors study whether the regulation is leading to “underfishing,” or fishing at a level less than what would produce the maximum sustainable catch, on a stock-by-stock basis. Because “underfishing” is not defined under US law, the authors focus on stocks that have healthy population levels and are not being overutilized. They collect data on 170 stocks that represent the majority of fish caught in the United States, with 88 of the 170 being potentially underutilized. While previous research has focused on low catch limits due to either precautionary regulation or a stock that cannot be caught without catching another species that was overfished, the authors show that there may be another reason: fishers are choosing not to fish the stock because of insufficient demand, making it unprofitable. They reviewed stock assessments, fishery management plans, and interviewed stock assessors. Based on the information they collected, they then classified the 88 stocks into four reasons: economics, bycatch considerations, uncertainty, and other reasons.

### Key Findings

**The fish stocks that were underutilized prior to the law taking effect remained underutilized.** The trend in utilization for the 88 potentially underutilized and less fished stocks (yellow line) in the years before the law’s reauthorization stayed fairly steady after 1996, indicating that the policy did not unnecessarily decrease the fishing rate of these stocks. For all 170 stocks in the study, overfishing was occurring in the years before 1996 because utilization levels were above the defined overfishing rate (utilization above 1 on the y-axis is considered overfishing, 1 on the y-axis). After 1996, utilization of all 170 fishery stocks eventually declines below the overfishing rate (values below 1 on the y-axis).

**About half of fish stocks considered underutilized were less fished due to economic reasons, not stringent policy management.** For 41 of the 88 underutilized stocks studied, experts on each fishery reported that fishers were choosing to catch less than the allowed amount because of a lack of consumer demand that generated low prices. “For these stocks, the key to achieving higher yields, if desired, may lie not in looser policy but in stimulating greater demand,” the researchers noted.

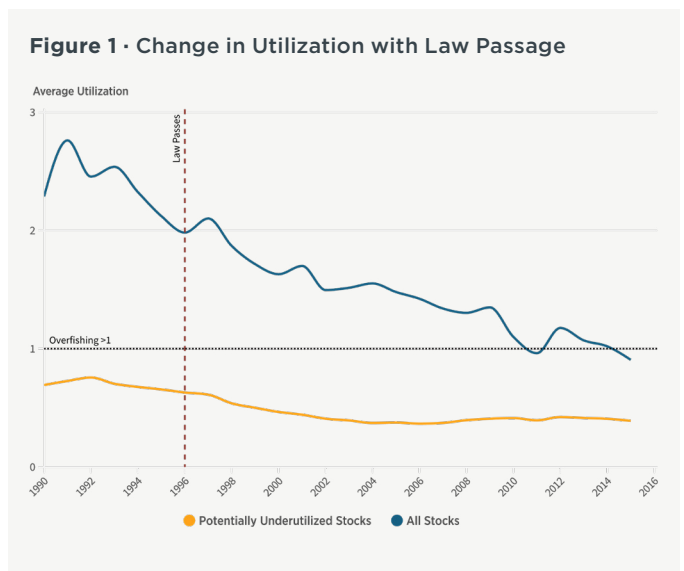
The remaining stocks studied were underutilized either because they could not be profitably caught without also catching other species of mostly overfished stocks that were more tightly managed (about a quarter of underutilized stocks) or there were scientific and management uncertainties (about one fifth of underutilized stocks). In both cases, further research and development of technical measures to more precisely target stocks could be made.

**Just four fish stocks made up the majority of the revenue of those less fished.** Most of the revenue—78.3 percent of the revenue of all underutilized stocks and 58.7 percent of the revenue of all stocks—is attributed to just four stocks: Eastern Bering Sea walleye pollock, Atlantic sea scallop, and the Gulf of Mexico brown and white shrimp stocks. Most of this revenue is attributed to just

the walleye pollock, which is constrained by a policy that predates the 1996 MSA and is now outside the scope of the MSA.

If policies were increasingly precautionary, the gap between the potential catch and the realized catch would presumably increase over time. However, the gap and share of revenue for these top four revenue-generating underutilized stocks stayed fairly steady in the years before and after the fishing regulations.

“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 say.



### CLOSING TAKE-AWAY

The researchers find that the law has *not* unintentionally created a new problem of leaving too many fish in the ocean (“underfishing”) because it was too precautionary. For the plurality of stocks, “underfishing” was driven mostly by a lack of demand. For the four most valuable stocks (with high demand), many factors are limiting the ability to fish them, some of which are outside the scope of the law.

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