

Why GAO Did This Study

Commercial and recreational marine fisheries managed by NMFS and regional fisheries managers are critical to the nation's economy. These fisheries contributed nearly \$118 billion to the U.S. gross domestic product and 1.8 million jobs in 2019. The increasing effects of climate change can alter the number and location of fisheries and have negative economic consequences on fishing-reliant industries and coastal communities.

House Report 116-455 includes a provision for GAO to examine federal efforts to prepare and adapt federal or jointly managed fisheries for the impacts of climate change. This GAO report examines, among other things, (1) the extent to which fisheries managers have used climate information and (2) challenges to enhancing the climate resilience of federal fisheries and opportunities to address challenges. GAO reviewed laws, regulations, NMFS documents, and relevant literature. GAO interviewed representatives from all five NMFS regions; NMFS' HMS Division; all eight Councils; and all three interstate commissions, as well as 15 relevant stakeholders, selected based on geographic diversity and other factors.

What GAO Recommends

GAO is recommending that NMFS (1) regularly collect and share information on fishery management activities for enhancing climate resilience and (2) work with federal fisheries managers to identify and prioritize climate resilience opportunities and develop a plan to implement them. The agency agreed with GAO's recommendations.

View [GAO-22-105132](#). For more information, contact Cardell Johnson at (202) 512-3841 or johnsoncd1@gao.gov.

August 2022

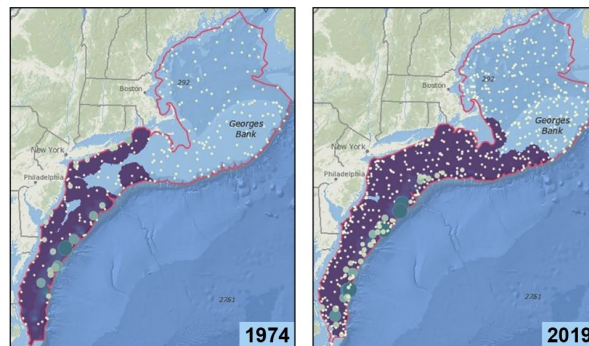
FEDERAL FISHERIES MANAGEMENT

Opportunities Exist to Enhance Climate Resilience

What GAO Found

Fisheries managers comprised of eight Regional Fishery Management Councils (Councils) and the National Marine Fisheries Service's (NMFS) Atlantic Highly Migratory Species Division (HMS Division) have generally used climate information to a limited extent in fisheries management activities. For example, GAO identified 12 out of 46 fishery management plans and amendments that considered climate-related information. However, many fisheries managers are leading initiatives that could advance the use of climate information in management, such as addressing distributional shifts in species, pictured below. Initiatives include the creation of a special task force to identify actions and tools to better incorporate climate information in fisheries management. Six of nine fisheries managers told GAO that they were not aware of climate-related fisheries management activities taking place in other regions. According to a few stakeholders, fisheries managers could benefit from learning about such actions, but NMFS does not regularly collect or share this information. According to GAO's *Disaster Resilience Framework*, federal efforts can help decision makers better identify and select actions to enhance climate resilience. An effort by NMFS to regularly collect and publicly share information on climate-related activities taken by fisheries managers could help decision makers identify and prioritize resilience measures.

Map from the National Marine Fisheries Service's Distribution Mapping and Analysis Portal Showing Changes in Black Sea Bass Distribution from 1974 to 2019



Source: National Oceanic and Atmospheric Administration. | GAO-22-105132

NMFS and fisheries managers face challenges to enhancing the climate resilience of federal fisheries, including limited data and modeling information, and resource constraints. However, opportunities exist to help address these challenges based on GAO's review of relevant literature and a 2018 NMFS guidance document on fisheries management and climate change. For example, one potential opportunity to help address limited fisheries data involves NMFS partnering with the fishing industry to collect data through equipment on commercial vessels. Most NMFS regions (three of five) have taken some related actions and shared the 2018 guidance document with the Councils. However, GAO found that one Council was not familiar with the document and that NMFS is not actively working with Councils on implementing opportunities that it identifies. According to the principles outlined in the *Disaster Resilience Framework*, NMFS could help address climate-related challenges facing the Councils by collaborating with them to identify, prioritize, and plan to implement opportunities to enhance the climate resilience of federal fisheries.