The NOAA FISHERIES NAVIGATOR

Proposed Federal Jonah Crab Management

Jonah crabs may be the next species to come under federal fishery management. In 2015, the Atlantic States Marine Fisheries Commission approved an Interstate Fishery Management Plan for Jonah Crab. States within the species range (Maine through Virginia) were required to comply with the Commission's Jonah Crab Plan in 2016. Subsequently, the Commission recommended that we take action in federal waters. In response, we recently published a rule proposing measures that complement the Commission's recommendations.

Why is the Atlantic States Marine Fisheries Commission leading Jonah Crab management?

Historically, Jonah crabs have been harvested

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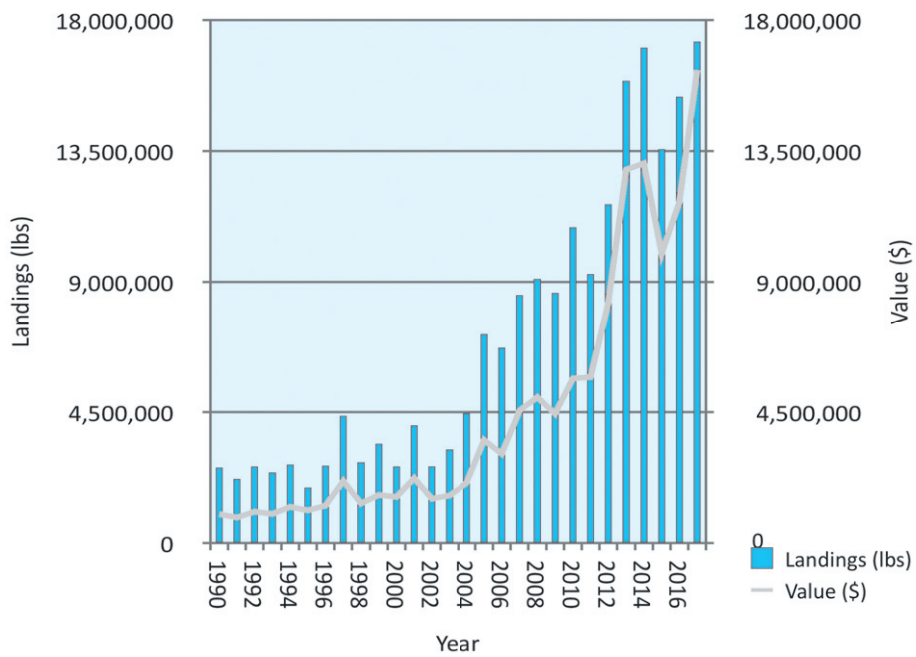
as an incidental catch in the American lobster trap fishery. Anywhere from 91 percent to 99.7 percent of Cancer crab landings between 1990 and 2014 were from pot and trap gear. Lobster harvesters did not traditionally target Jonah crabs, but sometimes kept and brought the crabs to market if they caught some while lobster fishing. Due to this linkage between the lobster fishery and the Jonah crab fishery, and an increase in recent landings, the Commission's American Lobster Board began developing an Interstate Fishery Management Plan for Jonah Crab.

Why is management necessary?

Landings have dramatically increased from nearly 3 million pounds in the early 1990s to more than 17 million pounds in 2014 as Jonah crabs have become a target of lobster traps. The Commission initiated management of Jonah crab at that time out of concern for future sustainability. The plan aimed to capture the fishery within the parameters that existed prior to management in 2015. The specific goal of the Commission's Jonah Crab Plan is, "to promote conservation, reduce the possibility of recruitment failure, and allow the full utilization of the resource by the industry."

Figure 1. Jonah Crab Landings, 1990-2017



What are we proposing?

The Commission recommended that we implement a suite of measures in federal waters. Table 1 summarizes the proposed measures.

Are there Commission recommendations that we are not proposing?

The Commission recommended two measures that we are not proposing in this action. Harvester reporting was included in the Jonah Crab Plan and recommended for implementation. However, the Commission recently approved a separate action that expands lobster and Jonah crab harvester reporting requirements. We will consider those recommendations for both fisheries through a separate action. The Commission also adopted measures for a regulated Jonah crab claw fishery. However, states have already approved measures ranging from a prohibition on landing claws to a fully regulated, targeted claw fishery. Rather than approving a measure that would create inconsistencies between us and some states, we did not propose regulations for the claw fishery, deferring management of claw harvest to individual states.

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Table 1. Proposed Jonah Crab Regulations

Sector	Management Measure	Requirement
COMMERCIAL	*Permitting*	*Landing requires a lobster permit*
	Minimum Size	*4.75-inch carapace width*
	Broodstock Protection	*Prohibit retention of egg-bearing females*
	Incidental Catch Limit	*Up to 1,000 crabs per trip and no more than 50% of catch onboard, by weight*
	Dealer Permits and Reporting	*Mandatory reporting*
RECREATIONAL	*Broodstock Protection*	*Prohibit retention of egg-bearing females*
	Catch Limit	*50 crabs per day*

Commercial Measures	Recreational Measures
Fishermen with Directed or Incidental shark limited access permits can retain a shortfin mako shark caught using longline or gillnet gear only if it is dead at haulback. *Fishermen using pelagic longline gear must also have a functional electronic monitoring system on board the vessel to retain a dead shortfin mako.*	*Fishermen with HMS Angling, Charter/Headboat, Atlantic Tunas General category, or Swordfish General Commercial permits with a shark endorsement can land a shortfin mako only if it is at least 83 inches FL for females and 71 inches FL for males (see image).* *All fishermen must use circle hooks for recreational shark fishing regardless of their location.*

THIS SUPPLEMENT PROVIDED BY NOAA FISHERIES SERVICE'S GREATER ATLANTIC REGIONAL OFFICE

Olivia Rugo • Managing Editor • 978-675-2167 • olivia.rugo@noaa.gov

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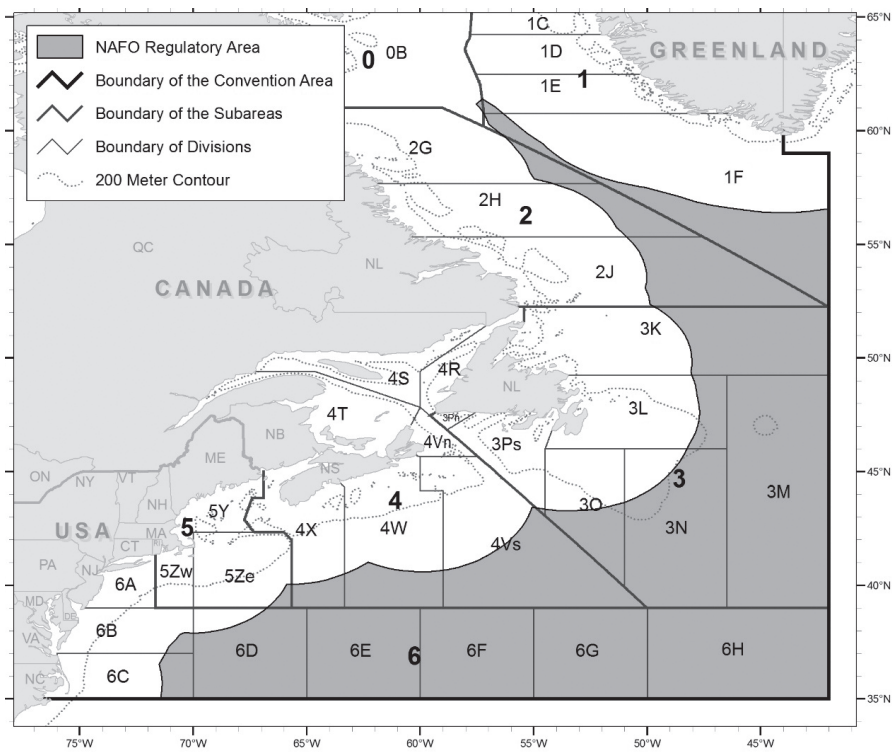
Making U.S. Fishermen More Competitive in the International Market

The Northwest Atlantic Fisheries Organization (NAFO) is an intergovernmental fisheries science and management body that manages most fishery resources in international waters of the Northwest Atlantic, except salmon, tunas, marlins, whales, and sedentary species such as shellfish. NAFO is responsible for the management and conservation of the fishery resources in the Regulatory Area (waters outside the Exclusive Economic Zones). The United States is one of the 12 contracting parties in NAFO from North America, Europe, Asia, and the Caribbean.

Currently, U.S. vessels participating in the NAFO fishery are not allowed to possess any fish, or parts of fish, that do not meet the minimum fish size in the domestic fishery for that species. For example, the domestic minimum size for yellowtail flounder is 12 inches. Currently, vessels could not land headed and gutted fish, or fillets, that were less than 12 inches in size. Framework Adjustment 58 to the Northeast Multispecies Fishery Management Plan (FMP) would exempt vessels on trips fishing exclusively in the NAFO Regulatory Area from the domestic minimum sizes for groundfish. On those trips, the vessels would be required to land fish that meet the NAFO minimum sizes as specified in the NAFO Conservation and Enforcement Measures. While NAFO regulates some of the same species managed under the Northeast Multispecies FMP, the NAFO stocks are distinct. Therefore, harvest of those stocks does not have a biological impact on U.S. stocks.

The proposed exemption from domestic minimum sizes would apply to all NAFO species included in the multispecies plan. The intent of this action is to proactively facilitate development of U.S. participation in NAFO, while applying to NAFO harvested species (e.g., yellowtail flounder) already being landed in the U.S. by U.S. vessels. Landing the dressed fish, even at sizes less than the domestic minimum size, does not give the NAFO participants a competitive advantage over domestic fishermen that rely upon the fresh fish market, nor does it negatively affect the fresh fish market. Instead, because the NAFO catch primarily goes into the frozen market, which is currently dominated by foreign interests, the intent of this action is to enable U.S. fishing businesses to compete in the frozen market. Currently, vessels from other countries that participate in the NAFO fishery have a competitive advantage because they can keep and sell a portion of their catch that U.S. vessels are forced to discard. Exempting the U.S. vessels from domestic minimum sizes will make U.S. vessels more competitive with foreign vessels.

Figure 1. NAFO Convention Area including Statistical Subareas, Divisions, and Subdivisions.



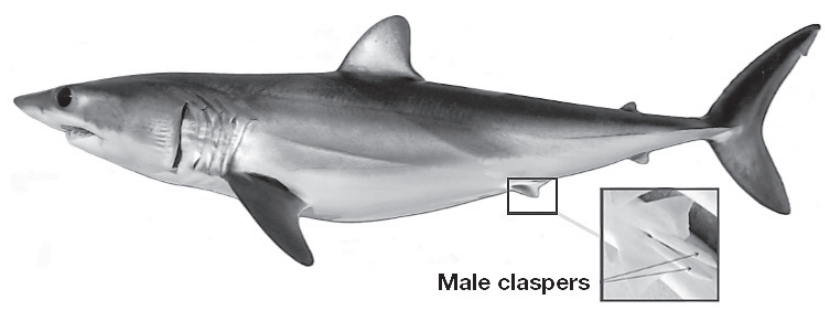
NAFO fishing trips require 100-percent observer coverage. All catch that comes onboard a vessel is identified and counted by the fisheries observer following NAFO protocols. Allowing U.S. vessels to harvest groundfish using NAFO minimum sizes enables the U.S. to be better stewards of NAFO resources by reducing discards that meet the NAFO size standards, but are below the domestic minimum size.

For more information, contact Mark Grant, Sustainable Fisheries Division, at 978-281-9145 or email him at Mark.Grant@noaa.gov

Final Rule Addresses Shortfin Mako Overfishing

The final management measures in Amendment 11 to the 2006 Consolidated Highly Migratory Species (HMS) Fishery Management Plan are now in effect.

This amendment is the latest action from our Atlantic HMS Management Division to address overfishing of shortfin mako sharks while ensuring fishing opportunities for commercial and recreational fishermen.



Look for claspers located between the pelvic fins to identify a male shortfin mako shark.

In 2017, the International Commission for the Conservation of Atlantic Tunas (ICCAT) released a stock assessment that declared the North Atlantic Shortfin Mako shark stock overfished and subject to overfishing, thereby triggering a measure requiring all member nations fishing on the stock to end overfishing and take steps to begin rebuilding.

We responded in March 2018 with a short-term emergency rule to reduce the number of sharks killed during fishing while a more comprehensive rule consistent with ICCAT requirements was researched, proposed, and made available for public comment.

Amendment 11's final long-term measures replacet hose in the short-term emergency rule and apply to all U.S. vessels and fishermen in the Atlantic, including the Gulf of Mexico and Caribbean Sea.

In addition, we are supporting actions at the international level to end overfishing of this species.

For more information, contact Guy DuBeck, Highly Migratory Species, at 301-427-8540 or guy.dubeck@noaa.gov.

Northeast Summer Flounder and Atlantic Striped Bass Assessments Completed

Two new stock assessments are ready for use by fishery managers in the region. Both are "benchmarks," which are the most complex and thorough form of assessment. They are also peer reviewed by external experts prior to release.

The assessment results indicate that summer flounder are not overfished and overfishing is not occurring, and that Atlantic striped bass are overfished and overfishing is occurring. The results for summer flounder include the stock component in Atlantic waters from North Carolina to the US/Canada border. The results for Atlantic striped bass apply to the stock component found in the coastal and most estuarine waters of all states and jurisdictions from Maine through North Carolina.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Summer Flounder

The summer flounder assessment was presented to the Mid-Atlantic Fishery Management Council Science and Statistical Committee in February. The striped bass assessment is with the Atlantic States Marine Fisheries Commission. Each body creates fishery management plans for fisheries in the region. The council focuses on fisheries in federal waters. The commission focuses on fisheries in interstate waters.

The summer flounder stock assessment process was completed by scientists from NOAA's Northeast Fisheries Science Center, the Mid-Atlantic Fisheries Management Council, state agencies, the fishing industry, and academia.

The summer flounder assessment benefits from one of the most comprehensive data sets in the region. It includes data from state surveys, federal surveys, recreational surveys, and data from the commercial fishing industry. Fishermen's data and input were used through vessel trip reports (logbooks), biological samples from commercial catches, data taken during commercial fishing trips by fishery observers, and recreational interviews and catch samples. Fishermen also had input into this assessment through research projects that focused on catchability: how efficiently flatfish species like summer flounder are caught in the NEFSC scientific bottom-trawl survey.

New data in the summer flounder assessment included updated estimates of recreational catch. The new estimates increased recreational catch, which increased estimates of numbers of fish in the stock. These data come directly from recreational anglers through interviews and mail surveys. Another new element was the evaluation of several sex-specific models, attempting to account for size differences between males and females. The model selected for this combined sexes, but the review allowed for significant discussion on building sex-specific models for this species.

Atlantic Striped Bass

The Atlantic striped bass assessment was led by the Atlantic States Marine Fisheries Management Commission and involved a number of state, federal, and academic researchers. New estimates of recreational catch were included in the assessment. This resulted in higher estimates of biomass and new young fish entering the population in comparison to the last assessment (2016), but did not change the overall population trend, which has been declining since 2003. For more on the Atlantic striped bass assessment, visit the Atlantic States Fisheries Commission.


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Jonah crab

Continued from page 1

Will this proposed action increase the number of vertical lines in the water and, therefore, increase interaction risks for large whales?

No. The rule proposes to link Jonah crab harvest to the lobster permit, and no additional traps are proposed to be allocated through this action. This action proposes to regulate the catch of Jonah crabs within the existing lobster trap limits. In addition, we are working with the Atlantic Large Whale Take Reduction Team and the Commission on the issue of whale entanglements. New measures may be introduced at a future date to decrease the entanglement risk of whales in gear with vertical lines.

When will the new measures be effective?

The recent proposed rule allows the opportunity for the public to comment on our proposed measures. Following the end of the comment period, we will develop a final rule. That rule will finalize and approve measures for the fishery. A specific timeline is difficult to predict, but we expect the rule to be approved and effective later in 2019.

How will this rule change the fishery for current participants?

We do not expect much to change for Jonah crab harvesters. The Commission's goal was to develop measures that capture the fishery within the parameters that existed in 2015 and prevent future expansion of the fishery. For example, the incidental catch limit was set to capture 99 percent of past trips. If the recommended measures successfully capture the existing fishery, industry can expect little to no change.

For more information, contact Allison Murphy, Sustainable Fisheries Division, at 978-281-9122 or email her at Allison.Murphy@noaa.gov.

How to Comment on Published Rules

As we work with the region's fishery management councils to implement new or updated regulations, there are several ways that you can voice your thoughts and opinions. Once the *Federal Register* publishes a rule that has a public comment period, you can comment in two ways:

1. **Comment electronically by going to Regulations.gov.** Once there, search for the identifying number in the *Federal Register* notice (in a format such as NOAA-NMFS-YEAR-####) or for a key word. Once you find the rule, click the Comment Now! icon on the right. You can then fill out and submit the web form or upload your letter.

2. **Submit comments by mail** by addressing your letter to the address found in the *Federal Register* notice. Remember to note attention to a person or subject as specified in the *Federal Register* notice.

We also seek comments for proposed Exempted Fishing Permits (EFPs). To submit your comments on a proposed EFP, email us at **NMFS.GAR.EFP@noaa.gov** and include the title of the research project in the subject line of the email.

You can find *Federal Register* notices for the Greater Atlantic Region for specific species on our website (go to the relevant Managed Species page and check the *Federal Register* Actions tab). You can also find *Federal Register* notices at **FederalRegister.gov**, the **U.S. Government Printing Office**, or at **Regulations.gov**.

The NOAA FISHERIES NAVIGATOR

Atlantic Sea Scallop and Herring Research Set-Aside Programs Fund Thirteen Projects

The New England Fishery Management Council (NEFMC) established Research Set-Aside Programs (RSA) to fund research that can help inform fishery management decisions and improve stock assessments. Currently, there are active RSA programs under the Atlantic Sea Scallop, Monkfish, and Atlantic Herring Fishery Management Plans.

Each year, the NEFMC reserves a portion of the allowable scallop catch, herring catch and monkfish days-at-sea to be awarded through a competitive grant process that we administer. Instead of giving money to support research like a typical grant program, specific amounts of fish and shellfish are awarded to successful applicants. These awards are then harvested through partnerships between scientists and fishermen to generate funds to pay for the research. RSA programs have proven to be an effective approach for funding cooperative research that can address fishery-specific science and management needs.

With the NEFMC, we are pleased to announce 12 projects that will be funded through the **Atlantic Sea Scallop Research Set-Aside Program** and one project that will be funded through the **Atlantic Herring Research Set-Aside Program**.

For more information about these programs, contact Ryan Silva, Sustainable Fisheries Division, at (978) 281-9326 or email him at Ryan.Silva@noaa.gov

2019/2020 Scallop Research Set Aside Project Selections

LEAD INSTITUTION	PROJECT TITLE
Commercial Fisheries Research Foundation	Piloting a Novel Dredge Type to Reduce Bycatch and Improve Fuel Efficiency in the Southern New England Scallop Fishery
Coonamessett Farm Foundation	An optical assessment of sea scallop abundance, distribution and growth in the Nantucket Lightship Scallop Management Area
Coonamessett Farm Foundation	Improving automated detection of scallops and flounder in optical surveys with stereo detection methods
Coonamessett Farm Foundation	An optical assessment of sea scallop abundance and distribution in the Southern Closed Area II Scallop Management Area
Coonamessett Farm Foundation	Seasonal Survey in the Atlantic Sea Scallop Fishery
Coonamessett Farm Foundation	Understanding the Impacts of the Atlantic Sea Scallop Fishery on Loggerhead Sea Turtles
National Fisheries Institute	Can Cutting Bar Modifications Reduce Bycatch and Increase Catch Efficiency in the Atlantic Sea Scallop Dredge Fishery?
State of Maine, Department of Marine Resources	Assessment of Sea Scallop Distribution and Abundance in the Northern Gulf of Maine Management Area
University of Massachusetts Dartmouth	High-resolution drop camera surveys to track scallop aggregations in Closed Area I access area, Nantucket Lightship, and Great South Channel
University of Massachusetts Dartmouth	Drop camera surveys examining the scallop population of the Mid-Atlantic and assessment of automated scallop count and measurement algorithm
University of Massachusetts Dartmouth	Assessing Potential Impacts of Offshore Wind Facilities on Regional Sea Scallop Larva and Early Juvenile Transport
Virginia Institute of Marine Science	In Situ high-definition camera monitoring to evaluate catch efficiency and performance of a survey dredge
Virginia Institute of Marine Science	A Cooperative High Precision Dredge Survey to Assess the Mid-Atlantic Sea Scallop Resource Area in 2019 and 2020

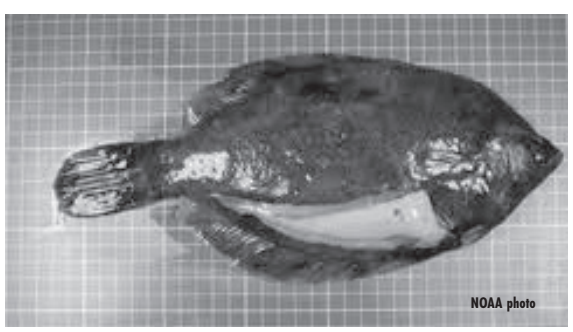
2019-2021 Herring Research Set Aside Project Selection

LEAD INSTITUTION	PROJECT TITLE
University of Massachusetts Dartmouth	Maintaining and Expanding Bycatch Avoidance Strategies in the Mid-Water Trawl Atlantic Herring Fishery

Fishermen Play Critical Role in Our Fish Reproduction and Condition Program

Reproductive information is an important component of fishery stock assessments. However, reproductive dynamics are influenced by characteristics that are known to vary in time and space, including size and age at maturity, numbers of eggs produced, and frequency of spawning. To better understand these reproductive dynamics and the underlying factors that drive their variation, scientists at the Northeast Fisheries Science Center (NEFSC) monitor the maturity and egg production of selected species.

Our fishery surveys are the best source of information on the average size when a fish species is old enough to reproduce. This information is best estimated using samples from survey-style gears that capture a wide range of sizes because estimating egg production requires sampling fish at specific reproductive stages before they start spawning. However, many fish species spawn during specific and often short time-periods that may not line up with our regular fishery surveys. Collaborative projects with industry can help provide samples from more areas, seasons, and specific habitats to help fill gaps in data. To date, NEFSC Cooperative Research projects, including Study Fleet and the Cooperative Gulf of Maine Longline Survey, have provided more than 20,000 fish samples to help increase these data.


NOAA photo

These samples are used for reproductive studies, and also for measuring the energetic condition of the fish, which improves our understanding of how fish condition can vary between years and populations, and relates to their reproductive output. This enhanced biosampling has led to insights into the reproductive potential of yellowtail flounder including annual variation, variation between stocks, and the effects of female body condition on egg production. Sampling of winter flounder has shown variation between areas in maturity, spawning seasonality, skipped spawning, and egg production.

Recently published work on the body condition of flatfish (winter, yellowtail, and summer flounder) identified the factors best suited for tracking changes in condition in these species, and how these are related to things such as reproductive strategies, growth, and maturity. Ongoing work is aiming to understand the environmental and energetic drivers of reproductive potential in these and other commercially important groundfish.

While the long-term (2009-present) monitoring efforts have focused on flatfishes, industry-based collaboration has also provided samples of other species for focused shorter-term studies. Herring samples are being used to evaluate skipped spawning and the proportion of fish that spawn in the spring or the fall, and haddock samples are being examined to better understand the reproductive dynamics in the Gulf of Maine and on Georges Bank, where extreme fluctuations in reproduction occur.

Recent efforts targeted sampling of data poor species such as cusk and wolffish, for which little information on life history is available in the western North Atlantic. Given the challenges with data poor species, industry-based sampling can be especially valuable, and increased data obtained from commercial catches of these species will help fill data gaps and improve the information available to resource managers and stock assessment biologists.

For more information on the NEFSC's Fish Reproduction and Condition Program, please contact Mark.Wuenschel@noaa.gov