Atlantic States Marine Fisheries Commission

Atlantic Mackerel Cooperative Research Initiative

Industry-Based Acoustic Data Collection

Request for Proposals (RFP)

Funding Opportunity Description

Summary

The NOAA Fisheries Northeast Fisheries Science Center (NEFSC) and the Atlantic States Marine Fisheries Commission (ASMFC) seek qualified applicants to record and share acoustic data collected using standardized protocols established within this RFP during the 2026/2027 Atlantic mackerel fishing season.

Background

The Atlantic Mackerel Research Initiative is a two-year cooperative effort between scientists, managers, and the fishing industry to address uncertainties in population dynamics and biomass estimates of Atlantic mackerel which are managed by the Mid-Atlantic Fishery Management Council. The goal is to advance understanding of the stock through collaborative research, with focus on five research elements: 1) acoustic detection, 2) spawning seasonality, 3) egg surveys, 4) movement and mixing, and 5) ecosystem drivers.

Management of Atlantic mackerel (*Scomber scombrus*) is challenged by the species' migratory nature and spatiotemporal variability. Traditional fisheries-independent surveys do not consistently sample mackerel aggregations due to the mismatch between survey timing/footprint and stock distribution, seasonal migrations, and catchability of the survey gear. This project works towards finding a cost-effective solution: harnessing the existing infrastructure and expertise of the commercial fishing fleet to collect continuous, high-quality acoustic data during routine fishing operations. By calibrating commercial acoustic systems, using standardized data collection protocols, establishing robust data pipelines, and utilizing advanced processing software, this initiative aims to provide scientific-quality acoustic data and local mackerel biomass estimates.

Goal

Establish and execute a comprehensive framework for the acquisition and evaluation of Atlantic mackerel acoustic data gathered from routine commercial fishing activities to reliably detect and estimate mackerel biomass using active acoustics.

Scope of Work

Timeframe
The research is expected to continue for two years (fall 2026 - fall 2028). Funding, however, is only provided for one year of research. There is a possibility of extension to two years contingent on additional funding.

Participating Vessels
Five commercially permitted fishing vessels that target Atlantic mackerel in the northeast USA (Maine to North Carolina) will be selected to participate in the project. Vessels must have existing echosounders that meet specifications listed in the “Vessel Requirements" section.

Calibration
To ensure data are scientifically defensible and comparable across vessels, the NEFSC will perform standard sphere calibrations on the echosounders of the five participating vessels. The echosounders will initially be calibrated in fall 2026 to allow vessels to begin collecting data during directed mackerel fishing activities. A second round of calibrations will occur on the same five vessels in winter 2027 so that echosounders can be recalibrated in colder water temperatures. Calibrations must be conducted in a water depth greater than 15 fathoms and typically take approximately 4- 8 hours to complete. Funding will be provided to cover the cost of vessel time and fuel for calibrations.

Data Collection
Participating fishing vessels will be required to record acoustic data using standardized settings during all mackerel fishing operations. Captains will also be encouraged to record acoustic data when mackerel are observed during transit. Captains will be expected to communicate acoustic data collection issues to NEFSC scientists in a timely fashion.

In addition to acoustic data, each captain will be required to collect the following data on fishing gear and catch components for each tow: gear used, latitude, longitude, date, time, tow duration, total poundage (measured or estimated) of Atlantic mackerel, and an estimate of weight and composition of any bycatch. Datasheets will be provided to each participating vessel to simplify the collection of gear and catch information.

Since echosounder data acquisition parameters (e.g. pulse duration and interval) are critical for interpreting acoustic data, successful applicants will need to adhere to a set of required echosounder settings. Captains will also be required to check in with a Project Coordinator before each trip to review settings and methods for recording and reporting metadata. The data will be reviewed by the NEFSC for compliance. Any discrepancies will be discussed with the captains prior to the next trip.

Data Transmission
Recognizing internet connectivity varies by vessel, we will implement a dual-track data retrieval system. Vessels with satellite internet (e.g., Starlink) will automatically or semi-automatically upload data files directly from the wheelhouse. Funding will be provided to cover data transmission costs. Vessels with limited bandwidth or no satellite connection will be provided

with hard drives and data will be securely downloaded directly from the drives during monthly port calls. Contracted vessels will be responsible for installing, maintaining, and using agreed-upon data transmission mechanisms.

Data Storage

Following data transmission, NEFSC will be responsible for ingesting the data into a secure database at the NOAA Fisheries cloud-based storage. All acoustic data will ultimately be archived at NOAA's National Center for Environmental Information (NCEI) that is optimized for large acoustic datasets, and ensures data longevity and metadata tracking.

Data Confidentiality

All raw acoustic data collected by participating vessels will be processed by the NEFSC using custom built open-source and Echoview software and will be utilized in presentations, reports, and other public-facing venues without restriction.

In accordance with NOAA Fisheries data privacy policies, only aggregated, high spatial resolution catch data will be utilized in presentations, reports, and other public-facing venues. Any public disclosure or inclusion of specific, identifiable high-resolution vessel catch data in such materials will require the explicit prior written consent of the captain or vessel owner.

Compensation

Contracts will include a $10,000 annual stipend to compensate industry partners for time associated with calibrating the acoustic systems on the vessel, collection of acoustic data during Atlantic mackerel fishing activities, and assistance with review and interpretation of resulting echograms. Additional funds will be allocated to each participating vessel for the installation and maintenance of data storage and transmission equipment for 12 months and for travel to participate in an in-person project kick-off meeting in Narragansett, RI.

Project Meetings and Communication

Participating vessels will be required to participate in semi-annual meetings to review data, discuss preliminary results, and plan next steps. These meetings may be in-person or virtual.

Vessel captains and owners will also be required to maintain communication with NEFSC scientists to plan calibrations, set up data collection and transmission routines, review echograms, and discuss progress.

Minimum Fishing Vessel Requirements

- Kongsberg/Simrad EK (firmware version 2.54) or ES (firmware version 2.90) systems installed on the vessel capable of recording active acoustic data at a minimum of 38, 120, and 200-kHz narrowband (i.e., CW) and/or wideband (i.e., FM/chirp) modes.
- Demonstrated experience catching Atlantic mackerel with bottom and/or mid-water trawls.

Additional Vessel Evaluation Criteria
Vessels that meet the minimum requirements will be ranked according to the following criteria and selected based on their combined ranking:

- Availability of Starlink or other satellite system for transmitting data remotely
- Echosounders with additional frequencies beyond those detailed in the minimum vessel requirements section
- Expertise with interpreting echosounder outputs to identify Atlantic mackerel
- eMOLT or other sensors that record a continuous record of temperature for each tow
- Experience participating in cooperative research

To Apply

1. To apply, applicants must complete a Google Application Form. All questions must be answered thoroughly. Failure to provide a response to any of the questions in the Google Application Form will result in the applicant being disqualified.

2. The Google Application Form can be found at the following link:

   https://forms.gle/5MBufremzhFi5TJR7

3. Questions regarding the Request for Proposals or the Google Application Form should be submitted via phone or e-mail to:

   Name: Jason Morson
   Northeast Fisheries Science Center
   Email: jason.morson@noaa.gov
   Phone: (267) 809-6527

4. Submission, Modification, Revision, and Withdrawal of Applications
   a. The deadline for application submission is **midnight EST**, **September 18, 2026.**
   b. ASMFC reserves the right to consult with and to consider information from its own sources, including information from state and federal agencies regarding the proposer's prior performance or the status of outstanding investigations or warrants involving the proposer.
   c. Late proposals
      i. Any application, modification, or revision received after **midnight EST on September 18, 2026** is "late" and may not be given full consideration.
   j. ASMFC is not liable for any costs incurred by vendors/contractors in developing or submitting their response to this RFP.

Funding Availability
Project funding is contingent on ASMFC receiving funds from NOAA Fisheries. ASMFC reserves the right to reject any and all proposals and make no award under the RFP if such action is in the best interest of ASMFC and NEFSC.