

American Lobster Initiative

The American Lobster Initiative was created to research the future of the American lobster and the industry and share its findings. Funded by NOAA's National Sea Grant Program, the program's goal is to increase the industry's resilience to the impacts of ecosystem change in the Gulf of Maine, Georges Bank, and southern New England.

Research

Since 2019, the ALI has funded 39 studies. Research topics span biological, social and economic aspects of lobster fishing.

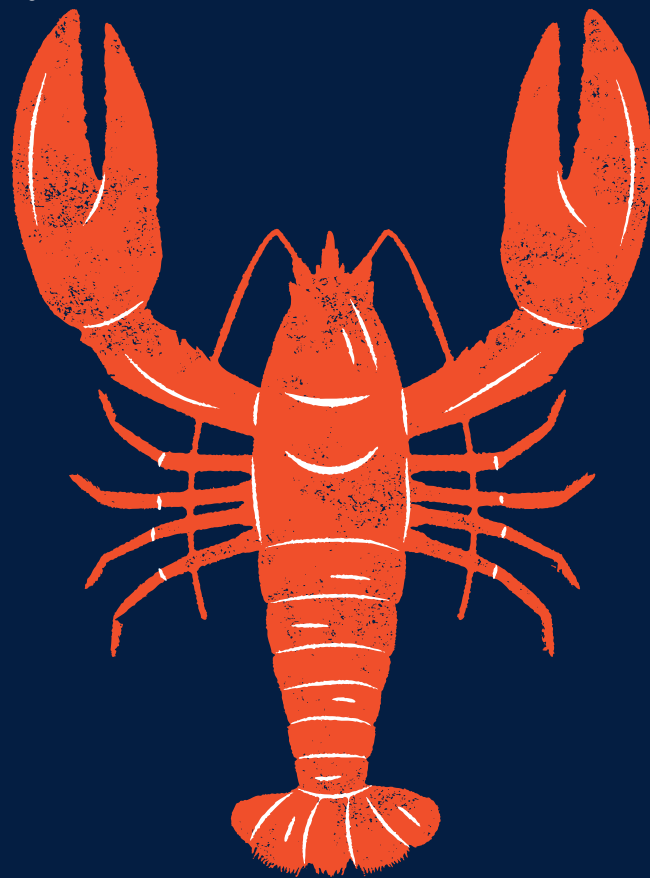
Impact of changing ocean temperature and chemistry

Lobster predators, prey and pressures

Spatial distribution at various lifecycle stages

Success of diverse lobstering business models

Development of gear and new bait



Communication

What good is research if no one uses it? WHOI Sea Grant received funding to create communication products about the ALI research findings, targeting nine different audiences:

- Lobster fishermen
- Resource managers
- Scientists
- Restaurants
- K-12 Educators
- Media
- Policy makers
- General public
- Non-profits

This project involves interviewing members of each audience to understand what findings are important and interesting to them and how best to communicate this information (e.g. podcast, articles, videos). The goal is to put the research into the hands of those who can use it.

Read about the
initiative:



Learn about the
research:



Contact us:
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2024 Funded Studies



A multi-disciplinary approach to investigating larval transport, settlement and recruitment in the Outer Cape Cod lobster fishery

Project Lead: Owen Nichols, Center for Coastal Studies

The aim is to supply the local fishing community and regional fishery managers with information on **when and where different sizes and sexes of American lobsters can be found**, where they grow up and where they lay eggs.

Characterizing hormone dynamics in the American lobster to predict molting probability: Insights for addressing knowledge gaps in the molt process

Project Lead: Amalia Harrington, University of Maine

Researchers aim to develop a novel way to **assess molt probability based on key hormonal indicators** to model molt probability and help inform stock assessment process.

Shifting interactions in the microbiomes of lobster eggs and their implications for lobster health

Project Lead: Jeff Shields, Virginia Institute of Marine Science

Research on the role of microbiomes in lobster health and disease resistance can be used to **promote healthy egg development** in lobsters, and findings will be used to inform fisheries managers about what constitutes healthy versus disease microbiomes on lobster embryos.

Genomic population structure of American lobster in U.S. waters for stock delineation

Project Lead: Timothy O'Donnell, Gloucester Marine Genomics Institute

This research aims to establish biologically accurate stock boundaries for the American lobster in the Gulf of Maine, Georges Bank and Southern New England. Results will be shared with the Atlantic States Marine Fisheries Commission's American Lobster Technical Committee.

The role of foraging and diet in determining energetic availability for female lobsters

Project Lead: Ben Gutzler, Wells National Estuarine Research Reserve

This research aims to understand the causes of differences in nutritional condition for female lobsters and consequently the **energy available for investment in growth and reproduction**.

Characterizing socioeconomic processes and impacts of change in the American lobster fishery

Project Lead: Joshua Stoll, University of Maine

This project aims to provide timely and relevant socioeconomic information to the American lobster industry, managers and the science community to inform decision-making aimed at **boosting resilience of lobster fishing communities in the face of environmental and economic change**.

Changing economic efficiency in the U.S. American lobster fishery and implications for management

Project Lead: Alexa Dayton, Maine Center for Coastal Fisheries

This research provides **lobster harvester cost and effort data** to assess the economic implications of and adaptations to ecosystem and regulatory changes for the Gulf of Maine American lobster industry. The results will aid in evaluating proposed management alternatives and understanding the impacts of gear investments.

Recruitment building blocks: Understanding American Lobster (*Homarus americanus*) growth and environmental effects during the first year

Project Lead: Heather Glon, Maine Department of Marine Resources

This project will reexamine aspects of the Maine Department of Marine Resource's Larval Lobster Survey and Lobster Settlement Survey to **inform estimates of recruitment** developed through the Atlantic States Marine Fisheries Commission Lobster Stock Assessment process.

Deep dive into the 2024 ALI research projects:

