Background

The Northeast Groundfish Gear Conservation Engineering and Demonstration Network (GEARNET) was established in September 2010, to tackle critical gear-related research questions in the groundfish fishery, within the context of the catch share management system.

Funded by NOAA’s Northeast Fisheries Science Center Cooperative Research Program, GEARNET is one of seven new network-oriented projects to address different regional fisheries.

Mission

GEARNET’s mission is to help Northeast groundfish fishermen develop and adopt fishing equipment that improves efficiency and selectivity, reduces environmental impact, and helps secure a sustainable, profitable groundfish resource and industry for future years.

‘Bottom-up’ approach and objectives

Within the ‘sectors’ management framework, GEARNET is taking a ‘bottom-up’ approach to capture and document urgent fisheries research needs, as perceived by the Northeast groundfish fishermen. Our objectives are as follows:

1. Hold scoping meetings with each groundfish sector and members of the common pool, to identify and prioritize the most urgent gear research needs as perceived by fishermen. Then, work with interested fishermen to develop pilot-scale proposals for work that addresses these needs.

2. Establish a multi-institutional GEARNET Technical Committee to:
   - Review the proposals submitted to GEARNET and develop a research schedule to address these needs;
   - Participate in proof-of-concept gear conservation research and/or demonstration projects, with each group of fishermen;
   - Review, analyze and report on project outcomes upon completion of the sea trials.

3. Share research findings throughout the region and help fishermen adopt gear designs that have demonstrated their potential to:
   - Reduce the discards of non-target species; and/or
   - Improve the energy efficiency of fishing activities; and/or
   - Minimize the environmental impact of fishing activities.
GEARNET as a network

Types of gear research addressed

GEARNET is open to all types of gear that are designed to target groundfish, including trawl, gillnet and hook gear. Following are some examples of the types of gear modifications that could be addressed through GEARNET:

- Modifications to mesh size, shape and angle to improve the selectivity of the net, helping fishermen avoid the species they are not permitted to catch, while catching good quantities of their target species.
- Demonstration of different net mensuration systems that enable fishermen to detect when their codend is full, to avoid excessive hauls of fish for which they have no allocation.
- Experimentation with net designs aimed at increasing catch control and reducing discards, for example, the separator trawl, the topless trawl, etc.
- Experimentation with devices aimed at deterring pest species (e.g. seals, dogfish, etc.).
- Monitor and assess fuel efficiency and energy use on fishing vessels, with the aim of lowering operating costs.

Project participants

GEARNET is being coordinated by a group of six partners (*lead PIs) who represent both science and industry organizations:

- Shelly Tallack* Gulf of Maine Research Institute
- Mike Pol* MA Division of Marine Fisheries
- Steve Eayrs Gulf of Maine Research Institute
- Pingguo He School for Marine Science and Technology, UMass Dartmouth
- Jon Knight Superior Trawl
- Mike Walsh Commercial groundfish fisherman

However, this new network approach to fisheries research is intended to be organic by design; thus, as the project gains momentum, the number, variety and skill set of GEARNET collaborators will grow. For a full list of project participants, please visit our website: www.gearnet.org/participants.html.

Contact and further information

GEARNET uses a variety of methods to communicate about the project, but our website (www.gearnet.org) is the primary source for project details, progress, findings and contact information.