

# Partnership Overview

## NATIONAL MARINE FISHERIES SERVICE



Photo: Florida Sea Grant



*Sea Grant enhances the efforts of the National Marine Fisheries Service by informing policy, increasing local adoption of regulations, and educating the public.*

### ENGAGE SHRIMPERS ON TED FUNCTION

Photo: Florida Sea Grant



Georgia Sea Grant educates shrimpers about new by-catch reduction technology by involving them in research.

Shrimp is by far the largest fishery in Georgia waters both in terms of catch and economic importance. And of all commercial fisheries, shrimp trawling contributes most to the problem of bycatch mortality. Turtle Excluder Devices (TEDs) and By-catch Reduction Devices (BRDs) mandated by the National Marine Fisheries Service (NMFS) have greatly reduced the amount of bycatch in US

waters. However, in the US South Atlantic the bycatch ratio hovers at around 5:1 (5 pounds of by-catch to each pound of shrimp).

Shrimpers collaborated with Georgia Sea Grant to collect data and communicate results comparing the newly certified Big Boy TED with the commonly used Double Cover TED. The new Big Boy TED, with smaller spacing, demonstrated the ability to reduce total bycatch biomass by 47% compared to the industry-standard TED. Shark, ray, and finfish bycatch was reduced by 15%. Importantly, there was no significant difference in shrimp retention, making this TED an economically viable and efficient option for local shrimpers.

Shrimpers joined the research crew on every trip and were also collaborators in many diverse activities designed to communicate the research results. As a result of this project, dozens of shrimpers voluntarily chose this bycatch-reducing TED for use on their commercial vessels. Shrimpers gained valuable experience participating in research, which allows them to have a better perspective about the challenges involved in making resource management decisions.

# 31

Sea Grant current projects include NMFS as a partner

(2014-2017 project cycle, Sea Grant database)

# 59,000

Fishers adopted responsible harvesting techniques as a result of Sea Grant outreach (2015 reporting cycle)

# 103

Graduate students have participated in the NOAA NMFS-Sea Grant Fellowship since 2000

# 3

NMFS staff working with the National Sea Grant Office in liaison and detail roles

# \$6.3 Million

Federal funds awarded in 2014 and 2015 thru Sea Grant Aquaculture Competitions



A Hawaii Sea Grant researcher investigated the spatial variability in the balance of accretion and erosion on Hawaii's coral reefs. The new microCT methodology for studying bioerosion was adopted by the NOAA Coral Reef Ecosystem Division, a NMFS program, for its long-term monitoring activities of ocean acidification in the Pacific, Coral Triangle, and Caribbean.



California Sea Grant is evaluating the effects of Rockfish Conservation Areas in central California 10 years post-closure through past-present fish survey comparisons. Results show significant increases in catch per unit effort of rockfish both in and outside the conservation areas.



Mississippi-Alabama Sea Grant funded NMFS and partners on a project to develop smartphone apps that allow boaters to report marine mammal strandings and to view and identify the protected animals without harassment.

## IMPROVE MODELS TO BETTER ASSESS STOCKS

Fisheries stock assessments are used to determine the status of fish populations and to establish levels of sustainable harvest for both commercial and recreational purposes. They are essential to successful implementation of ecosystem-based fisheries management.

Alaska Sea Grant funded researchers to analyze fisheries stock assessment models. The researchers found ways to improve confidence in sample size and reduce error in data collection. Using their improved age-structured assessment models, they were able to more accurately estimate the mean effective sample size across several years of data.

Their work showed bias and uncertainty in a spatially explicit age-structured assessment model for walleye pollock in the Bering Sea. In their improved models, fish stock movement can be estimated without data from tagged fish movement studies. Researchers provided insight into which models lead to the most robust results in stock assessment outputs.

The North Pacific Fishery Management Council is now using stock assessment information from the improved models to make management decisions, and NMFS is considering the improved models as they develop methods for assessing sablefish stocks.



Photo: NOAA

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## COLLABORATE TO ENSURE SUSTAINABLE SHELLFISH HARVEST

Connecticut Sea Grant and NMFS in Milford, CT are leading a collaborative and stakeholder-driven effort to develop a vision plan for Connecticut's shellfish. Shellfish aquaculture is an important industry in Connecticut; 44 companies provide 300 jobs. Recreational shellfish harvest opportunities exist in most coastal towns, and between commercial and recreational harvest areas, shellfish grounds occupy nearly 80,000 acres of underwater land. Both challenges and opportunities exist, but understanding the interests and concerns of various

stakeholders is mutually beneficial.

The Connecticut Shellfish Initiative held several public meetings to gather information regarding opportunities and threats to growth of Connecticut's shellfish sectors, including natural shellfish resources, recreational harvest, and commercial shellfish production. Based on public meeting input, more than 100 issues were identified and prioritized by sector. Shellfish sector interest groups comprising a diverse steering committee facilitated the development of the vision

plan for the State's shellfish sectors by reviewing and providing feedback on the issues and priorities. The plan includes goals, measurable objectives, and recommendations for future actions that will contribute to each sector's growth. The plan, which will be shared with technical working groups and publicly for comment, will be finalized in 2016.

This collaborative effort brought a diverse group of stakeholders together and is fostering a shared and sustainable vision for the future of shellfish in Connecticut.



NOAA Sea Grant  
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