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Science, Service, Stewardship



Strategic Planning for Cooperative Research Present Opportunities and Future Directions


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Objectives of NOAA's Northeast Cooperative Research Program

- Foster coordination, cooperation, communication, and mutual respect among scientists, managers, and industry.
- Improve the data upon which fishery management decisions are made.



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Science, Education, Community

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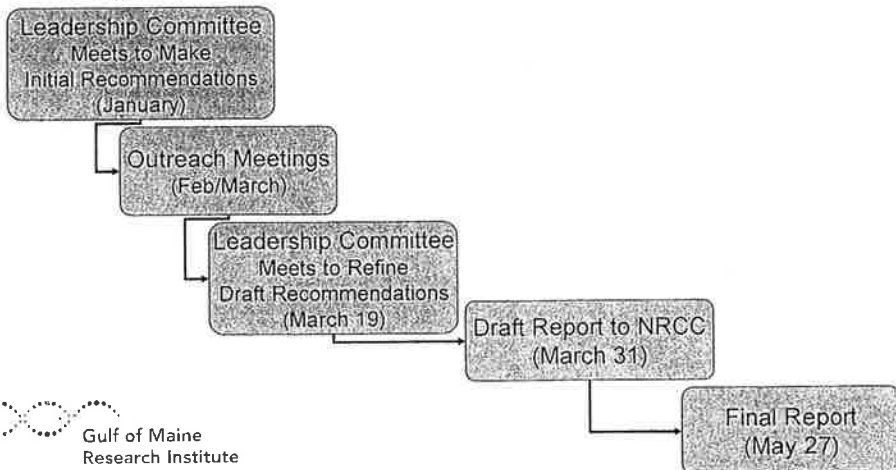


Goal of Strategic Planning Project

To define a clear set of *strategic cooperative research priorities* and inform the evolution of NOAA Fisheries' Northeast cooperative research programs from 2010-2014.



Northeast Cooperative Research Strategic Planning Process





- Frequent dialogue
- Responsiveness to management
- Collaboration with NMFS scientists and technical people
- Networks among institutions



Lessons Learned



(More Lessons Learned)



- Sharing products and equipment
- Peer review of results
- Project data collection
- Annual meeting





General Principles

- *Focus limited cooperative research funds on critical management needs in the short-term.*
- *Cooperative approach in the northeast has proven successful and should be fostered.*



Broad Recommendations for Cooperative Research in the Northeast

1. **Seek funding from other parts of NOAA to support core needs (NEAMAP and Inshore Surveys)**
2. **Support continued funding of Northeast Consortium to provide a source for cooperative research with industry that may have longer-term impacts on fisheries management**
3. **Leverage cooperative research infrastructure and expertise by encouraging use within other parts of NMFS**





General Recommendation for NOAA's Northeast Cooperative Research Program

**Restructure NOAA's Cooperative Research
Program to improve performance, efficiency,
and adaptability.**



Restructure Northeast Cooperative Research Program

1. Formalize and permanently establish the Northeast Region Cooperative Research Leadership Committee (CRLC)
2. Enhance internal administrative capacity
3. Revise acquisition methods and structure:
 - utilize alternative acquisition processes
 - establish multi year cooperative agreements
 - create networked organizations
4. Consider broader programmatic regulatory permitting and NEPA/Protected Resources review processes.
5. Develop and implement a coherent outreach and education strategy



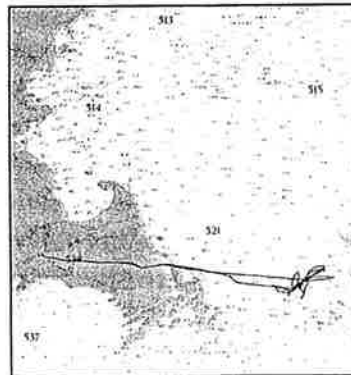
Theme I: Fishery-Dependent Monitoring and Critical Data Gaps

Support development and implementation of innovative monitoring tools and pilot programs to address critical data gaps as the industry moves to new management regimes.



Fishery-dependent Monitoring

1. transfer technology of new fishery-dependent monitoring and reporting tools (extension of Study Fleet program)
2. conduct studies and analyze new information on discards





Surveys and Data Gaps

1. formalize industry independent information network of survey programs
2. fund pilot surveys to address critical data gaps
3. collect species-specific biological samples

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Theme II: Conservation Engineering Network

Develop a comprehensive conservation engineering program within NEFSC/CRPP to achieve regional coordination and technology transfer with industry.





Conservation Engineering Network

1. design collaborative networks in the region
2. establish conservation engineering node at NEFSC
3. create industry panel
4. purchase gear and provide extension services
5. leverage Sea Grant program



Species-specific Cooperative Research Priorities





Priority cooperative research projects based on the Mid-Atlantic Fishery Management Council 2009-2014 Research Plan and the New England Fishery Management Council Research Priorities and Data Needs (2009-2013), with particular reference to research appropriate for a cooperative approach utilizing fishermen's knowledge, expertise, and fishing vessels.

HIGH PRIORITY RESEARCH APPLICABLE TO COOPERATIVE RESEARCH

MID-ATLANTIC

Summer Flounder

- Need significant increase in biological sampling (length, age, sex, maturity) for summer flounder catch (kept and discards) across fisheries at fine scales of resolution. Critical sex ratio stock productivity questions need to be addressed. Discard mortality issues remain contentious. Develop a SNE – Mid-Atlantic Industry Based flatfish survey to provide a periodic samples and biomass estimates, alternating with the Monkfish survey.

Black Sea Bass and Scup

- A ventless trap sampling survey should be considered as a potential index of abundance. Fishery independent surveys for scup and black sea bass (unvented trap surveys) providing opportunities for additional conventional tagging and biological sampling.
- Study localized changes in sex ratio for black sea bass a function of age, size, and exploitation rates that may affect reproduction patterns as male dominance and territorial ranges change.

Butterfish

- Further research on improving the precision of discard estimates for butterfish from all sources.

Loligo Squid & Butterfish

- Conduct gear research to reduce discards in the *Loligo* squid fishery.
- Mesh selectivity - *Loligo* retention and butterfish escapement (summer and winter).
- Test gear modifications (in addition to mesh size) in the *Loligo* squid fishery to reduce bycatch of butterfish and other species (Fishing Circle Mesh).
- Evaluate potential for dynamic area management to reduce butterfish-scup interactions
- Study mortality rates of *Loligo* squid that pass through trawl mesh.

Sea Turtle Bycatch in Mid-Atlantic Trawl Fisheries

- Develop turtle exclusion devices for trawl gear in the Mid-Atlantic.
- Explore opportunities to leverage work on sea turtle bycatch funded under other programs (NMFS BREP, Scallop RSA).

Mid-Atlantic trawl fishery – baseline economic survey of infrastructure investments

- Initiate survey to start developing industry cost estimates for fleet impacts of trawl gear modifications to address bycatch reduction.



NEW ENGLAND

Groundfish

- Increase quantity and quality of data on discards and bycatch in the monkfish, groundfish (including small mesh) and skate fisheries. All gears.

Skates

- Identify fishing practices or gear modifications that may improve skate size and species selectivity. Reduce fishing mortality on skate stocks of concern.

Herring

- Bycatch monitoring.
- Increased sampling and stock identification research to address fishery conflicts

Sea Turtle Bycatch in southern New England Fisheries

- Gear modifications or fishing practices that can reduce or eliminate turtle bycatch without unacceptable reductions in target catch. Leveraging opportunities exist.
- Bycatch monitoring of scallopers for turtles, yellowtail and other flounders.

Spatial-temporal distributions

- Further investigations into stock definition, stock movements, mixing, and migration through tagging studies, DNA markers, morphological characteristics and other means for groundfish, skates, herring and silver hake (dogfish, wolfish).

MEDIUM PRIORITY RESEARCH APPLICABLE TO COOPERATIVE RESEARCH

Tilefish

- Hook selectivity study. Collect data on spatial distribution and population size structure.

Spiny Dogfish

- Conduct tagging and genetic studies of spiny dogfish in U.S. and Canadian waters to clarify current assumptions about stock structure.
- Investigate the distribution of spiny dogfish beyond the depth range of current NEFSC trawl surveys, possibly using experimental research or supplemental surveys.

LOW PRIORITY RESEARCH APPLICABLE TO COOPERATIVE RESEARCH

Ocean quahog

- Conduct further work to determine the relationship between dredge efficiency, depth, substrate and clam density.

Atlantic Mackerel

- Develop pilot survey to explore for old fish to test hypothesis of dome in commercial fishery selectivity.

Illex Squid

- Determine size and age-at-maturity and growth parameters for *Illex* squid. (RSA #1)

Red Crab

- Examine red crab sex ratios by depth and year, information on larval supply, transport, settlement and early juvenile distributions and abundance.