DRAFT Mid-Atlantic Council RSA Program
2015 Research and Information Priorities List

TOP PRIORITY:

Spanning Multiple Species

- Conduct fishery independent surveys for all Mid-Atlantic species, especially in the near shore zone (as provided by the Northeast Area Monitoring and Assessment Program-NEAMAP).

ADDITIONAL PRIORITIES:

Interactions Between Longfin Squid, Butterfish, Atlantic Mackerel and River Herring

- Test gear modifications (in addition to mesh size), videography and/or alternative gear types (e.g., jigging) in the longfin squid fishery to reduce bycatch of butterfish and other species.

- Study mortality rates of longfin squid that pass through trawl mesh to evaluate effects of mesh regulations on fishing mortality of longfin squid by size and age.

- During the spring, conduct exploratory sampling for squid, Atlantic mackerel, and butterfish in deep water beyond the range of the current NEFSC spring bottom trawl survey.

- Investigate potential for industry surveys to support butterfish or squid assessments.

- Investigate mesh size and/or gear technologies (e.g., grates or separators) to reduce retention of small Atlantic mackerel and river herring in the Atlantic mackerel fishery.

- Explore spatial distribution of stocks relative to the mixing of the northern and southern "contingents" of Atlantic mackerel (i.e., tagging, genetics, chemical assay, and/or microchemistry of otoliths).

- Exploration of bottom trawl catchability characteristics for Atlantic mackerel.

- Participate with industry in investigating the contemporary overlap between the surveyed Atlantic mackerel stock area, Atlantic mackerel commercial fishery, and Atlantic mackerel distribution, and explore historical databases for the same purpose to better understand the interpretation of Atlantic mackerel abundance indices (survey, catch per unit effort).

Summer Flounder

- Evaluate the length, weight, and age compositions of landed and discarded fish in the summer flounder fisheries (recreational and commercial) by sex. Focus should be placed on age sampling of summer flounder 24 inches or larger in total length, using paired hard part samples (i.e., scales, and when possible, otoliths).

- Evaluate gear modifications to reduce discard mortality in the recreational fishery.

Bluefish

- Evaluate the amount and length, weight, and age compositions of discards from the commercial and recreational fisheries.

- Initiate fishery-dependent and independent sampling of offshore populations of bluefish during the winter months (consider migration, seasonal fisheries, and unique selectivity patterns resulting in a bimodal partial recruitment pattern; consider if the migratory pattern results in several recruitment events).

Black Sea Bass

- Perform studies focused on life history and reproductive behaviors, such as changes in sex ratio as a function of age and size, or the evaluation of the sizes of territories in relation to mating or reproduction.

- Increase sea sampling to verify information from commercial logbooks toward providing better estimates of discards (with emphasis on pot trap and hook and line gear).

- Evaluate and, if appropriate, continue a fixed gear survey of black sea bass similar to the one used for scup.

Scup

- Estimate the fishery components used to calculate scup mortality for commercial and recreational landings and discards (with emphasis on discards).

- Expand age sampling of scup from commercial and recreational catches. Focus age sampling on scup 10 inches or larger in total length.

- Review and evaluate existing fishery independent indices for scup.

Illex Squid

- Determine size, age-at-maturity, and growth parameters for Illex squid.

Spiny Dogfish

- Investigate the effects of stock structure or distribution, sex ratio, and size of pups on birth rate and first year survival of pups.

- Continue large scale (international) tagging programs, including conventional external tags, data storage tags, and satellite pop-up tags, to help clarify movement patterns and migration rates.

- Investigate the distribution of spiny dogfish beyond the depth range of current NEFSC bottom trawl surveys, possibly by using experimental research or supplemental surveys.

- Continue aging studies for spiny dogfish age structures (e.g., fins, spines) obtained from all sampling programs (include additional age validation and age structure exchanges), and conduct an aging workshop for spiny dogfish, encouraging participation by NEFSC, Fisheries and Oceans Canada, other interested state agencies, academia, and other international investigators with an interest in dogfish aging (US and Canada Pacific Coast, International Council for the Exploration of the Seas).

- Evaluate ecosystem effects on spiny dogfish acting through changes in spiny dogfish vital rates (e.g., natural mortality, fecundity, size/age at maturity, etc.).

Motion passed at August 2013 Council meeting:

RSA

Move in 2015, RFP for RSA will indicate intent to maintain NEAMAP as top priority project. Other projects may be funded depending on available resources.

Heins for Committee (14/2/1)

Uses of Data Generated by the NEAMAP Mid-Atlantic/Southern New England Nearshore Trawl Survey, 2007-2013

Assessment Related (NMFS & ASMFC)

Data provided to & *incorporated* into past assessments

- **Atlantic Menhaden** – Predator diet data for inclusion in Multispecies VPA
- **Atlantic Sturgeon** – Abundance data for ESA listing and subsequent re-evaluation
- *Longfin Squid* – Abundance, distribution, & length
- **River Herring (Alewife & Blueback)** – Abundance, distribution, length, sex, & maturity
- *Summer Flounder* – Abundance & age
- **Winter flounder** – Abundance, distribution, length, sex, maturity, & age

Data provided to but *not incorporated** into an assessment
**Due to short time series of data available, NOT because of data quality.*

- **Atlantic Sea Scallop** – Abundance, distribution, & length
- **Black Drum** – Abundance, distribution, length, sex, maturity, & age
- *Bluefish* – Abundance, distribution, length, & age
- *Scup* – Abundance, distribution, length, sex, maturity, & age
- **Skate complex (Clearnose, Little, & Winter)** – Abundance, distribution, & length
- *Spiny Dogfish* – Abundance, distribution, length, sex, maturity, & diet
- **Weakfish** – Abundance, distribution, length, sex, maturity, & age

Data provided to an assessment & results currently *pending*

- **American lobster** – Abundance, distribution, length, sex, berry status & stage, shell disease
- **Atlantic croaker** – Abundance, distribution, length, sex, maturity, & age
- *Black Sea Bass* – Abundance, distribution, length, sex, maturity, & age
- *Butterfish* – Abundance, distribution, length, sex, maturity, & age
- **Horseshoe crab** – Abundance, distribution, length, sex, & maturity
- **Smooth dogfish** – Distribution & abundance
- **Spot** – Abundance, distribution, length, sex, maturity, & age
- **Striped Bass** – Length, sex, maturity, & age
- *Summer Flounder* – Abundance, distribution, length, sex, maturity, & age
- *Tautog* – Abundance, distribution, length, sex, & maturity

State Regulations (Setting of Conservation Equivalency)

- *Scup* – State of New York
- *Summer Flounder* – State of New York & Commonwealth of Virginia

Additional Research Efforts

- *Black sea bass* - ageing exchange with NMFS & Massachusetts DMF.
- *Black sea bass* - hard part (scale/otolith) comparison for ageing.
- *Butterfish* - delineation of preferred habitat with NMFS, Sandy Hook Laboratory.
- *Longfin squid* - began recording sex and maturity data in 2013.
- *Monkfish* - population genetics with the University of Madrid in Spain.
- *Scup* - hard part (scale/otolith) comparison for ageing.
- *Summer flounder* – supported sampling to quantify first year growth and habitat preferences.
- *Summer flounder* – hard part (scale/otolith) comparison for ageing (ongoing).
- **Alewife & blueback herring** - collaboration to improve stock assessment with University of New Hampshire.
- **Alewife & blueback herring** - population genetics with University of California, Santa Cruz.
- **American lobster** – began sampling hard parts to develop age data for this species.
- **Atlantic croaker & spot** - ageing exchange with ASMFC partners.
- **Atlantic croaker, black drum, kingfish, & spot** - population genetics with South Carolina DNR.
- **Atlantic menhaden** - contaminant analysis in collaboration with Seton Hall University.
- **Bluefin tuna** - investigation of prey species as a source of contaminant loads.
- **Coastal bats** - delineation of populations with the University of Maryland.
- **Coastal sharks & Atlantic sturgeon** - tagging studies in collaboration with NMFS.
- **Little skate** - population genetics with Boston University.
- **Silver hake** - population genetics with colleagues at VIMS.
- **Tautog** - population genetics with Virginia Marine Resources Commission.
- **Striped bass** - sampling to identify prevalence and severity of *Mycobacterium* infection in the coastal migratory population.
- **Striped bass** - investigation to quantify predatory impact in collaboration with NEFSC and in response to Congressional inquiry.
- Quantified biogeography of Block Island & Rhode Island Sounds with University of Rhode Island to support Marine Spatial Planning efforts (Rhode Island Ocean SAMP).

- Expanded diet sampling to generate coastwide trophic model in collaboration with SEAMAP.
- Began working with Massachusetts DMF, Maine/New Hampshire, and NEFSC Bottom Trawl Surveys to identify and quantify possible shifts in species distributions in Northeast waters.
- Initiated efforts to quantify the behavior of fishes (e.g., Longfin squid and flatfishes) relative to the NEAMAP trawl, and in turn develop estimates of capture efficiency/catchability.
- Received over 200 visits to our online catch and diet databases since initialized in early 2012.