

**TESTIMONY OF  
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**ON  
PROGRESS MADE TO DATE AND ISSUES STILL FACING THE MID-  
ATLANTIC IN RELATION TO THE REAUTHORIZATION OF THE  
MAGNUSON-STEVENSON  
FISHERY CONSERVATION AND MANAGEMENT ACT**

**BEFORE THE  
SUBCOMMITTEE ON OCEANS, ATMOSPHERE, FISHERIES,  
AND COAST GUARD  
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION  
U.S. HOUSE OF REPRESENTATIVES**

**JULY 23, 2013**

Good morning, Mr. Chairman and Members of the Committee. Thank you for the opportunity to testify before you today on science. My name is John Boreman and I am an adjunct professor in the Department of Biology at North Carolina State University. I retired from NOAA Fisheries at the end of 2008, where my last two positions were as director of the Northeast Fisheries Science Center (NEFSC) and director of the Office of Science and Technology. Since my retirement from NOAA, and in addition to my faculty position at NC State, I have been chair of the Scientific and Statistical Committee (SSC) for the Mid-Atlantic Fishery Management Council (MAFMC), a member of the SSC for the South Atlantic Fishery Management Council (SAFMC), and chair of the Executive Steering Committee that oversees the development and implementation of NOAA's new marine recreational fishing survey (MRIP). Also, I am currently serving as president of the American Fisheries Society (AFS). AFS was established in 1871 and is the world's oldest and largest professional society dedicated to fishery science and management, with over 9,000 members in 64 countries.

Today, I would like to focus my remarks on the scientific aspects of the Magnuson-Stevens Act (MSA) as they relate to establishment of the MAFMC SSC's acceptable biological catch (ABC) recommendations, and identify where adding language to MSA can help reduce scientific uncertainty and bolster the scientific underpinnings of ecosystem-based fisheries management.

Since the enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act in 2006, our SSC has worked with the MAFMC to establish ABC control rules and has successfully implemented those rules for all the stocks managed by the MAFMC. Our rules are based on the amount of confidence

the SSC has in the information contained in the associated stock assessments by using a four-level approach. Level 1 assessments account for all major sources of scientific uncertainty in the data sources and assessment methods. Level 2 assessments account for most major sources of scientific uncertainty and have a reliable estimate of uncertainty for the overfishing limit. Level 3 assessments do not have a reliable estimate of uncertainty for the overfishing level, but the SSC feels comfortable using a proxy value. Finally, Level 4 assessments contain no reliable estimates for key biological reference points, including the overfishing limit. Many of the other SSCs have adopted similar rating systems for information related to ABCs that is generated by stock assessments. Unfortunately, all of the stocks managed by the MAFMC are associated with either a Level 3 or Level 4 assessment. This means that, according to our control rules, the buffer between the overfishing limit and the ABC needs to be much larger because of the greater amount of scientific uncertainty associated with the assessment.

### ***Support Expansion of Industry-Based Surveys***

The problem that has led to the SSC's lower-level ratings of the stock assessments for fishery species in the mid-Atlantic region is related to the poor quality of input data used in the assessment models, not the quality of the models themselves. Enhancing sampling frequency in current fishery dependent and fishery independent surveys can address some of the data quality issues, such as improving estimates of bycatch-related fishing mortality. However, two of the principal sources of scientific uncertainty in stock assessments are inadequate spatial coverage and inefficient or inappropriate survey gear. *Supporting expansion of industry-based cooperative surveys in reauthorization of the MSA can help to address both of these major sources of scientific uncertainty.*

Industry-based surveys can complement the spatial coverage of ongoing fishery independent surveys being conducted by the NEFSC; the Northeast Area Monitoring and Assessment Program (NEAMAP) survey conducted under the research set-aside program of the MAFMC is an excellent example of how industry vessels are being used to sample near shore in areas that are unreachable by the large NOAA survey vessels. The SSC would also like to see survey coverage expanded further offshore, outside the current offshore extent of the spring and fall bottom trawl surveys conducted by the NEFSC, particularly with regard to reducing the uncertainty in stock biomass estimates for species like Atlantic mackerel, spiny dogfish, shortfin squid, and longfin squid. Industry vessels could be used to expand the survey range.

Employment of alternative sampling gear, such as traps, longlines, and midwater trawls, to complement the bottom trawling gear used by the NEFSC, can also be undertaken through the use of industry-based surveys. For example, the NEFSC's Cooperative Research Program and the MAFMC's research set-aside program are testing the use of traps deployed from industry vessels in developing more robust stock biomass estimates for scup and black sea bass.

### ***Promote Closer Collaboration between Industry and NOAA Fisheries***

In development of the MRIP system of surveys, NOAA Fisheries is testing the use of angler-generated catch information to complement collection of information on recreational and other types of non-commercial catch. Although using such information is appealing to the fishing community, and would probably generate more “buy-in” to the catch and effort estimates being generated through MRIP, a major drawback is that the angler-generated information needs to be collected in a statistically robust fashion or it cannot be used. The same drawback applies to using data generated by industry-based surveys. *Reauthorization of the MSA can help in this regard by allowing the commercial industry and non-commercial angling community to work closely with NOAA Fisheries scientists in designing cooperative data collection programs that would yield high quality data.* Currently, this type of close collaboration during the early stages of program development is not possible due to constraints imposed by the grants process within the agency.

### ***Directly Address the Need to Conserve Forage Fish Species***

Forage fish species have become the poster children for ecosystem-based fisheries management. The MAFMC SSC is being encouraged by outside groups to give forage fish a special status that would result in a lower-than-normal ABC for forage fish that are directly managed by the MAFMC (such as squids, Atlantic mackerel, and butterfish). Although we are sensitive to the concerns of these groups, we have discovered that the definition of a forage species varies across the SSCs, as well as how each SSC accounts (or does not account) for forage status in their ABC recommendations to the fishery management councils. *Reauthorization of MSA can help clear up confusion and inconsistencies among the SSCs by defining what constitutes a forage species and requiring that ABC recommendations from the SSCs account for the importance of forage species to the food web of the fish community.*

In closing, I have touched on three areas where changes to language in the MSA can help reduce the scientific uncertainty in stock assessments (and thus reduce the buffer between the ABC and the overfishing limit) and help facilitate recognition of the implications of ABCs directed at individual fishery stocks to ecosystem-level impacts. Specifically, I am requesting that language in the reauthorization of the MSA: (1) promote expansion of industry-based surveys; (2) promote closer collaboration between the commercial and non-commercial fishing interests and NOAA Fisheries; and (3) directly address the need to conserve forage fish species.

Thank you for the opportunity to testify and I am available to answer any questions you may have.