Mid-Atlantic Fishery Management Council
800 North State Street, Suite 201, Dover, DE 19901
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

M E M O R A N D U M

Date: 25 March 2019

To: Michael P. Luisi, Chairman, MAFMC

From: John Boreman, Ph.D., Chair, MAFMC Scientific and Statistical Committee

Subject: Report of the March 2019 SSC Meeting

The SSC met in Baltimore on the 19th and 20th of March 2019 primarily to address a number of topics: (1) review 2020 ABC recommendations for Golden Tilefish and Blueline Tilefish; (2) receive a briefing on the new stock assessment scheduling plan recently adopted by the Northeast Region Coordinating Council (NRCC); (3) discuss SSC input into the Council's five-year research plan; (4) provide feedback to the Northeast Fisheries Science Center (NEFSC) on their draft state of the ecosystem report; (5) receive a briefing on the current status and future plans for the Northeast Trawl Advisory Panel (NTAP); and, under Other Business, (6) discuss involvement of the SSC in agency decisions that overrule the SSC's (and Council's) ABC recommendations, and (7) finalize plans for SSC guidelines on determining coefficients of variation for overfishing limits (Attachment 1).

A total of 14 SSC members participated in the meeting on March 19th and 15 members on March 20th (Attachment 2), which constituted a quorum for each day. Also participating were Council members and staff, NEFSC staff, and a representative from the fishing industry. Documents referenced in the report can be accessed via the SSC's meeting website (http://www.mafmc.org/ssc-meetings/2019/march-19-20).

Golden Tilefish

José Montañez (Council staff) summarized the current status of management, the data update provided by the NEFSC, and the most recent fishery performance report for Golden Tilefish. According to the data update, the size distribution of fish landed continues to be wide and comprises all market categories. In addition, the strong 2013 year class seems to be progressing through the fishery as expected. Based on the lack of compelling evidence to the contrary, the SSC decided to maintain its ABC recommendation for 2020 (**742 mt**).

The SSC expressed concern that there appears to be no strong year class following the one produced in 2013. The SSC is also concerned about the lack of information on recreational catch and supports its earlier recommendation to include recreational catch in the next assessment.

The SSC encourages the catch recording system being planned for the tilefish recreational fishery to be implemented as soon as possible.

Blueline Tilefish

Matt Seeley (Council staff) summarized the current status of management, the data update provided by the NEFSC, and the most recent fishery performance report for Blueline Tilefish. Available data on landings and discards shows levels similar to recent years and well under the ABC. Lacking evidence to the contrary, the SSC decided to maintain its ABC recommendation for 2020 (**45.6 mt**).

The SSC noted that the catch distribution of Blueline Tilefish in 2018 shifted north, compared with previous years, which could be a single-year anomaly or be indicative of a possible range expansion for the species. The SSC encourages charter boats to report sizes (lengths, weights, or both) of the Blueline Tilefish caught, as well as location, to get a better handle on the biological and distributional characteristics of the species in the Northeast. The SSC also encourages coordination between the Northeast and Southeast US regions in the conduct of surveys targeting Blueline (and Golden) Tilefish. Finally, as already mentioned for Golden Tilefish, the SSC encourages the catch recording system being planned for the tilefish recreational fishery to be implemented as soon as possible.

NRCC Assessment Scheduling and Peer Review Process

Brandon Muffley (Council staff) briefed the SSC on the stock assessment scheduling and peer review process recently adopted by the NRCC. His briefing was essentially the same as the one given to the Council by the NEFSC at the December 2018 meeting in Annapolis, but with additional details about the scoring factors used for ranking managed species across council jurisdictions, the various levels of management track reviews, and how research topics are selected and ranked. The new management track process provides routine updates for all managed species on a set timetable, greater flexibility to improve assessments without necessitating a full benchmark, and guidelines for sorting management track assessments into levels that dictate to extent of peer review needed. The research track process can be species- or topic-oriented, and establishes a five-year schedule that allows time to identify research needs, garner resources, conduct the research, and peer review research results. Working groups comprising scientists within and outside the NEFSC will be established for each research track species or topic, similar to the one recently used for the Atlantic Mackerel benchmark assessment and the one envisioned for addressing timing of *Illex* squid management advice.

Much of the SSC discussion centered around the additional workload that will likely be required of SSC members. The SSC chairs for both the New England and Mid-Atlantic councils will serve on the Assessment Oversight Committee, along with the chief of the NEFSC Population Dynamics Branch and the chair of the ASMFC Assessment Science Committee, which will be responsible for ensuring that management track assessments receive the proper level of peer review. Members of the SSC will be asked to serve on panels for expedited or enhanced peer

review of management track assessments. SSC members commented that the time currently envisioned to conduct expedited (1-2 hours) and enhanced (half to full day) management track peer reviews is underestimated. In addition, SSC members suggested additional factors that could have been considered in the species scoring matrix, such as shifting spatial distributions induced by climate change. Regarding the research track process, one of the benefits of the five-year scheduling is that it will allow solicitation and the potential prioritization of funds from sources outside the Council and NEFSC, including agency-based programs such as S-K grants, NOAA Sea Grant, the NOAA Office of Oceanic and Atmospheric Research, and industry-based programs such as SCeMFiS (Science Center for Marine Fisheries). The SSC also encourages consideration of improvements to existing data collection programs and assessment methods, in addition to contemplation of new ones as potential topics for the research track.

Five-Year Research Plan

Brandon Muffley (Council staff) provided an overview of the proposed process to update the Council's comprehensive five-year research plan. The Council agreed to update the research plan a year early in order to align it with and be informed by the Council's next Strategic Plan (2020-2024). The SSC noted the statutory requirement in the MSA for each Council to develop these plans, but questioned how this plan is used to inform, prioritize, and fund research priorities for both the NEFSC and the Council. The SSC also noted the NEFSC and Council may utilize these plans differently given the potential differences in scale, overall goals, and objectives; the SSC offered that it might be informative to structure the plan in a way that accounts for these differences. The SSC indicated that it would be helpful to get feedback as to what current research priorities were and were not addressed and why, and if any of the research was used within the management process. The SSC also offered some initial feedback on larger topics (themes and programs) the next research plan should highlight (e.g., recreational data collection and improvements to stock assessments). Council staff will continue to work with the SSC and others (i.e., Advisory Panels, Monitoring Committees) to continue the development of the research plan. Time will be set aside on the agenda for the September SSC meeting to look at broader research issues in the mid-Atlantic region.

State of the Ecosystem Report

Sarah Gaichas presented the draft 2019 Mid-Atlantic State of the Ecosystem (SOE) report produced by the Northeast Fisheries Science Center. The presentation reviewed the purpose of the report within the MAFMC EAFM framework, report structure, and an overview of 2019 results. These results were used to update the MAFMC EAFM risk assessment, and revised risk assessment summary tables were presented. Her presentation finished with an overview of technical improvements to ecosystem reporting, including the online availability of all indicator data and detailed technical methods for each indicator.

The aim of the SOE report is to inform fishery managers on an annual basis regarding ecosystem status and trends that are relevant to fishery management decision making. The report is designed to be short (<30 pages) and to use non-technical language. As in 2017-2018, the report is organized to align indicators with overarching management objectives. Similar to 2018, the

2019 report emphasizes synthesis across indicators (Overview section, pages 1-2), as well as reporting of individual indicators, and included a wide range of expertise in the planning, synthesis, and reporting through a series of workshops. Council staff (Brandon Muffley) participated in the organizational workshop in August 2018, which shaped the 2019 report.

The 2019 SOE includes new information as requested by MAFMC. The spatial scale of indicators is now included in each description at the request of the SSC in 2018. NEAMAP survey indices were added and compared directly with NEFSC survey indices (although further analytical work is to be done). Recreational fishery diversity (fleet and species) indicators were also added, and feedback from the SSC was requested on how to account for SAFMC-managed species. Finally, a Chesapeake Bay water quality indicator was added to partially address concerns about estuarine habitat quality. Some other planned improvements, such as statistical analysis of patterns across indicators, completion of a management complexity indicator, and quantitative evaluation of other ocean uses overlap with current fishery areas, could not be completed due to the government shutdown December 2018-January 2019; however, these analyses are planned for the 2020 report.

The SSC members were supportive of the work overall, and specifically appreciated the responsiveness to their 2018 comments in the 2019 report, as well as the improved transparency of SOE methods and the availability of indicator data. In response to a question on next steps in the EAFM process, the SSC was informed of the ongoing effort to develop a Summer Flounder EAFM conceptual model, to be developed in 2019.

The SSC noted that some indicators (e.g., revenue, recreational diversity) have many potential drivers that are changing over time, and asked whether these were appropriate risk indicators if the underlying drivers have not been analyzed in depth in the report. Similarly, the basis for assessing risk due to climate pressures on certain species (e.g., ocean acidification on scallops) in the SOE and associated risk assessment is based on the published climate vulnerability assessment, rather than more quantitative dose-response curves. Further, the SSC suggested that long term trends may be less important for some indicators than pattern detection (higher frequency variation), such that analytical methods could be further developed to detect significant patterns within and across indicators. Finally, the SSC inquired whether research was underway to determine ecosystem-level reference points or to suggest indicator-based management thresholds to further operationalize EAFM.

The SSC provided specific comments on recreational diversity indices. First, a general review of diversity literature for applications at different scales (e.g., total vs. south Atlantic vs. other managed species groups) was recommended, as was working with the Council to better determine objectives for the indicator. Distinguishing the MAFMC, SAFMC, and ASMFC managed species to the extent possible would be desirable to help determine how much control an individual management entity might have over changes in the indicator, as well as informing the extent of potential future management collaboration that may be necessary as ecosystem conditions change.

The SSC suggested additional indicators for consideration, including a young-of-year index (available from multiple surveys), frequency and occurrence of warm core rings from the Gulf

Stream (as both aggregation zones and drivers of species shifts), indicators of ocean acidification, and diet-data based indicators, such as mean stomach weights across feeding guilds or average weights of different diet components over time. The public requested improved indicators of apex predators, specifically for blacktip, spinner, and sandbar sharks, which are increasingly encountered by fishermen in the Mid-Atlantic.

Northeast Trawl Advisory Panel

Wendy Gabriel (NEFSC and SSC member) updated the SSC on the status of the activities of the Northeast Trawl Advisory Panel (NTAP). Her update included the purpose and objectives of NTAP in the context of the its charter, with objectives of understanding NEFSC trawl survey gear performance and methodology, the evaluation of the potential to complement or supplement any regional trawl surveys, and the improvement of understanding and acceptance of trawl survey data quality and results. To this end, NTAP has completed several studies of NEFSC survey trawl efficiency by comparing catch rates of nets with standard rockhopper sweeps to nets with heavy chain sweeps. This enables an estimation of relative efficiency of rockhopper sweeps and, in turn, estimates of swept area biomass. Results of these experiments have already been used in assessments of Witch Flounder, Georges Bank Yellowtail Flounder (including TRAC), Gulf of Maine Winter Flounder, and Summer Flounder. As recommended by NTAP, future operational assessments will note specifically whether gear efficiency data were evaluated during the assessment process and incorporated into the model and if not, why not. The intent is to evaluate and incorporate results from these experiments where data are relevant and adequate.

Currently, NTAP is focusing on trawl wingspread consistency: if wingspread varies with depth, how does that affect estimates of area swept and gear performance? Analyses of the effect of variable area swept are nearly complete. Starting this summer, NTAP will be refining criteria for acceptable wingspread ranges based on results of flume tank experiments and a comparison of catch rates between nets with optimum wingspread and over- and under-spread. Performance of different door types will also be evaluated. A roadmap to improve performance for stock assessment data reliability will be developed, which integrates these and potentially other approaches. Decisions will be based on scientific research results, input from NTAP, and input from the SSCs, and may be a hybrid of several approaches. Funding for field experiments this year was obtained from de-obligated prior year money.

One potential emerging research focus of NTAP may be an evaluation of effects of designated wind energy areas on the current bottom trawl survey design and execution. Wind energy areas will render large portions of some survey strata untrawlable, and complementary sampling designs and protocols will need to be developed to monitor those areas in the future. Evaluation of potential changes in species distributions and associated possible impacts on availability to fishery independent surveys, and expansion of the number of species with trawl efficiency estimates may also be candidates for future work.

Although NTAP raised the question of effect of tow duration on survey performance in its earlier discussions, gear efficiency emerged as a theme, based on the potential to include those types of information in stock assessments (or as diagnostic and interpretive information, when constraints

on operational assessment data are present). Earlier work by Pennington and others on potential effects of tow duration on precision and accuracy may warrant revisiting. Although trawl sensors provide data on wingspread, they do not provide a direct indicator of trawl footrope performance, and as wingspread increases from optimum, the footrope may lose contact with the bottom. There may be opportunities to use management strategy evaluation to consider how trawl survey data is processed, using the Atlantic herring MSE approach.

Other Business

GARFO's ABC for Black Sea Bass: The main discussion topic under Other Business was the action taken by GARFO last fall to unilaterally overrule the ABC recommended by the SSC at its July 2018 meeting. The SSC's recommendation had been endorsed by the Council at its August 2018 meeting, and used to set proposed catch limits by the Council for Black Sea Bass in 2019.

The 2019 ABC specification published by GARFO for Black Sea Bass was not the same one recommended by the SSC. Instead, an ABC specification for the 2019 fishing-year was set by GARFO that was higher, equivalent to the SSC recommendation for the 2018 fishing year. This decision was made by GARFO based on newly available data from NEFSC scientists that indicated that the 2015 year-class of Black Sea Bass had a high probability of being above average. The SSC was neither notified nor consulted on the change in ABC, and to date we have been unable to determine if the decision was subject to scientific peer review. During the February 2019 SSC webinar, we were informed by GARFO staff that the SSC was not consulted because of the short rulemaking deadline to implement the 2019 specifications.

The Magnuson-Stevens Act and NOAA Fisheries Operational Guidelines specify the roles and responsibilities for the science and management of stewardship, specifically tasking the Council's SSC to undertake the responsibility of recommending ABCs for each fishery under management by the Council based on peer-reviewed science. The SSC's ABC recommendation to the Council is a result of the SSC's consideration of best available science and thorough scientific debate before reaching a consensus.

While GARFO has presumptive authority for implementing Black Sea Bass regulations, the SSC suggests the manner in which this recent ABC action was taken undermines the trust that the SSC has built with the Council and stakeholders. The SSC has a track record demonstrating that it is an independent and unbiased source of scientific recommendations, and that its decisions are not influenced by management pressure felt by the Council and the Regional Office. Oftentimes, Councils and GARFO are subject to advocates seeking to increase catches beyond scientifically sustainable levels. The MSA process was specifically designed to have the SSCs recommend the ABCs in order to insulate the biologically-driven decision making from such upwardly driven policy influences. In addition, the SSC is concerned that the "new data" process used by GARFO may be more difficult and not be as readily adopted if the outcome results in a lower ABC than recommended by the Council and the SSC. For these reasons, the SSC does not support the continued use of the GARFO process as described for Black Sea Bass.

The MAFMC SSC has demonstrated it can be responsive to requests from the Council to review its ABC recommendations based on new information or changed circumstances. Such new data has not always made a scientific case sufficient to persuade the SSC to make a change consistent with the principles of sustainability and the Council's risk policy.

The SSC finds that, although time was short in the GARFO Black Sea Bass example, a quick turnaround review by the SSC of the new data and method used by the NEFSC in its analysis could have occurred, perhaps via email or telephone. This would have added some transparency and accountability to the way the action was being taken, and would have been more consistent with the roles envisioned by the Act. At a minimum, notice of the pending action overruling the SSC recommendation via communication from GARFO to the SSC would have been a desired professional courtesy that promoted future collaboration and cooperation.

If this type of situation occurs again in the future, the SSC is prepared to move quickly in evaluating the data and methods used by NEFSC in support of GARFO actions affecting management of Council species.

OFL CV Guidelines: The SSC Working Group developing guidelines for how the SSC selects an appropriate coefficient of variation (CV) for the overfishing limit (OFL) in its ABC-setting process used the opportunity afforded at the SSC meeting to get feedback from the entire SSC on finalization of the guidelines. Besides completion of the guidelines document for eventual presentation to the Council, the SSC is concerned that the process for implementing the guidelines in setting ABCs may become too cumbersome and time-consuming to be handled effectively during an SSC meeting. The SSC agreed that preparation of a pre-decision document that walks through the nine elements of uncertainty that constitute the CV would add efficiency to the ABC-setting process.

A consensus approach was agreed upon by the SSC members attending the meeting. For each species in which an ABC recommendation is required, the SSC lead for that species would draft a narrative, in consultation with Council staff, that evaluates the key sources of uncertainty and recommends an appropriate "bin" for the OFL CV (60%, 100%, or 150%). The narrative would be reviewed by a standing panel of SSC members to ensure consistency in interpretation of the guidelines and with how other species are being handled before being circulated to the entire SSC prior to the meeting in which the ABC will be set. The narrative drafted by the SSC lead would be considered "pre-decisional" and not in any way binding the SSC to a particular CV choice. Initially, the standing review panel would comprise the members of the OFL CV working group.

The final draft of the guidelines, and the associated process for their implementation, will be presented to the full SSC at its May 2019 meeting, with the intent of delivering them to the Council at the Council's June 2019 meeting in New York City.

c: SSC Members, Warren Elliott, Chris Moore, Brandon Muffley, José Montañez, Matt Seeley, Paul Nitschke, Jan Saunders

Mid-Atlantic Fishery Management Council

Scientific and Statistical Committee Meeting

March 19 – 20, 2019

Hyatt Place Inner Harbor

511 South Central Avenue, Baltimore, MD, 21201

AGENDA

Tuesday, March 19, 2019

1:00 Golden Tilefish data and fishery update; review of implemented 2020 ABC (Montañez)

2:15 Blueline Tilefish data and fishery update; review of implemented 2020 ABC (Seeley)

3:30 NRCC assessment schedule and review process (Boreman/Muffley)

5:00 Comprehensive 5-year Research Plan (2020-2024) – Overview (Muffley)

5:30 Adjourn

Wednesday, March 20, 2019

9:00 NEFSC Mid-Atlantic State of the Ecosystem Report (Gaichas)

- Update of Council's Risk Assessment
- Update on EAFM Summer Flounder conceptual model

10:30 Update on Northeast Trawl Advisory Panel activities (Gabriel)

11:30 Other Business

12:00 Adjourn

Attachment 2

MAFMC Scientific and Statistical Committee
19-20 March 2019

Meeting Attendance

Name	Affiliation
SSC Members in Attendance:	
John Boreman (SSC Chairman)	NOAA Fisheries (retired)
Tom Miller (SSC Vice-Chairman)	University of Maryland – CBL
Ed Houde	University of Maryland – CBL (retired)
Mike Wilberg	University of Maryland – CBL
Dave Secor (via webinar)	University of Maryland – CBL
Paul Rago	NOAA Fisheries (retired)
Sarah Gaichas (via webinar)	NOAA Fisheries Northeast Fisheries Science Center
Wendy Gabriel	NOAA Fisheries Northeast Fisheries Science Center
Lee Anderson	University of Delaware (emeritus)
Mark Holliday	NOAA Fisheries (retired)
Yan Jiao	Virginia Tech University
Mike Frisk (via webinar, March 20th only)	Stony Brook University
Rob Latour	VIMS
Brian Rothschild	University of Massachusetts – Dartmouth (emeritus)
Olaf Jensen	Rutgers University
Others in attendance:	
Matt Seeley	MAFMC staff
José Montañez	MAFMC staff
Brandon Muffley	MAFMC staff
Paul Nitschke (via webinar, March 19th only)	NOAA Fisheries Northeast Fisheries Science Center
Warren Elliott	MAFMC Vice-Chair
Greg DiDomenico (March 20th only)	GSSA