Joint Meeting of the Mid-Atlantic Fishery Management Council & Scientific and Statistical Committee

Wednesday, August 11, 2021

3:30 P.M. – 5:00 P.M.

Philadelphia, PA (in-person and remote)

AGENDA

3:30 Welcome/Introductions

3:35 Update from the SSC Economic Work Group (G. DePiper, Economic Work Group Chair)

- Update on the RSA re-development case study – progress to date, plan for rest of year, early challenges and lessons
- Potential process and approaches for future SSC Economic Work Group engagement

4:05 Advancing Ecosystem Science and Management Application (S. Gaichas, Interim Ecosystem Work Group Chair)

- Report from SSC Ecosystem Work Group on short/long term priorities, analyses, and potential work products and outcomes
- Ecosystem science needs and considerations to support management decisions, planning, and priorities

4:35 Stock Rebuilding – Science and Policy Considerations (P. Rago, SSC Chair)

- Potential guidance, approaches, and considerations – biological, economic, uncertainty etc. – for stocks under a rebuilding plan

5:00 Adjourn

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Michael P. Luisi, Chairman | P. Weston Townsend, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: July 29, 2021

To: Council
Scientific and Statistical Committee

From: Brandon Muffley, staff

Subject: Background Information for 2021 Joint Council-SSC Meeting

Introduction:

In August 2019, the Mid-Atlantic Fishery Management Council (Council) and its Scientific and Statistical Committee (SSSC) met jointly for the first time in order to discuss a number of pertinent topics and issues[1]. The meeting also provided an opportunity to foster greater dialogue and build relationships between the Council and SSC given the limited interaction between the two groups. Given the overall success of the first meeting, a second joint meeting was convened in October 2020, and one is planned in 2021 during the August 9 – 12, 2021 Council meeting in Philadelphia, PA.

The August meeting week was chosen for the joint meeting in an effort to have the topics and discussion help provide input and direction on potential future Council and SSC priorities. This early feedback would allow for any potential priorities or topics be considered as the Council develops its Implementation Plan for next year and as the SSC considers future agenda topics.

At their July meeting, the SSC discussed a number of potential topics for the joint meeting. Topics considered were prior recommendations made to Council, ongoing activities of the SSC, and new topics and challenges identified during the July SSC meeting. Three topics were prioritized and additional background material for each agenda item is provided below and were developed by members of the SSC. This information is intended to provide an introduction to the topic and hopefully stimulate discussion between the Council and SSC and offer feedback on the future direction and approach for these topics.

Update from the SSC Economic Work Group:

Work Group Members:

Lee Anderson, John Boreman, Geret DePiper (Work Group Chair), Mark Holliday, Jorge Holzer, Olaf Jensen, Yan Jiao, Paul Rago (SSC Chair)

[1] More information about the 2019 and 2020 joint Council-SSC meeting, including agenda and meeting materials, can be found at: https://www.mafmc.org/briefing/august-2019 and https://www.mafmc.org/briefing/october-2020, respectively.

Background:

The Council agreed to the Economic Work Group engaging in a Research Set Aside Re-development case study during their December 2020 Council meeting. The aims of this case study are twofold:

1) Provide economic expertise to the Research Steering Committee, particularly around the selection of candidate fisheries and research projects to be funded, maximizing funding available for research projects, and monitoring and enforcement issues.
2) Develop a programmatic process for engaging SSC economic expertise in support of Council decision-making.

The Research Steering Committee is hosting three preliminary workshops in the run-up to a final in-person workshop, the latter in which recommendations to the Council will be developed. Workshop 1 was held on Thursday, July 15, 2021, and focused on Research. Workshop 2 is scheduled for August 31, 2021, and will focus on Funding, while Workshop 3 is slated for October 14 with a focus on Enforcement.

Current Status

The Economic Work Group formed three sub-groups centered around the preliminary workshop topics: Dr. Mark Holliday leads the Research subgroup, Dr. Jorge Holzer leads the Funding subgroup, and Dr. Lee Anderson leads the Enforcement subgroup. Each subgroup is tasked with leading a discussion of economic considerations during the Workshop corresponding to their topic, as well as developing supporting information and/or analyses. For example, Dr. Holliday and the other members of the Work Group developed one-page briefing papers and presented them for the most salient economic issues surrounding Research:

1) Consistency with Stated Council Plans/Objectives & Linkages to Management Goals; Application of Benefit/Cost Principles in Proposal Evaluation
2) Peer Review and Principal Investigator (PI) Communications: Before, During, and After Completion of RSA projects
3) RSA Program Transparency and Conflicts of Interest
4) Universal data access and transparency
5) Decoupling allowances and forage and ecosystem species

Drs. Holzer and Anderson, in conjunction with the rest of the Economic Work Group, will develop supporting information for the Funding and Enforcement Workshops, respectively, later this summer and fall, with an ultimate aim of developing a combined white paper for delivery to the Council's use in consideration of the Research Set Aside re-development.

Lack of anticipated access to RSA auction data has relegated the Economic Work Group's guidance to be strategic in nature. The Work Group has also had to assume the goals and objectives of any redeveloped RSA program would align with historical objectives to provide input prior to workshops, as only in Workshop 4 are final recommendations regarding these objectives ultimately going to be developed.

Future Direction

Preliminarily, the Economic Work Group has found the overall work process on developing Council economic advice to be productive so far and would like to continue work on future

Council priorities, with their consent. In consideration of any possible future work the SSC Economic Work Group will align any transition to new work with the Council's discussion and selection of 2022 priorities.

Advancing Ecosystem Science and Management Application:

Background:

The MAFMC is already leading many other Councils on the use of ecosystem information with the overall EAFM approach, annual EAFM risk assessment, recent conceptual modeling, and in-progress MSE.

Based on feedback from annual State of the Ecosystem (SOE) report reviews, both the Council and SSC would like to make better use of existing ecosystem information presented each year, and to develop more tailored products and processes to use this information in management.

Potential Considerations:

Working with the Council, the SSC would like to establish short term and long term objectives to advance the operational use of ecosystem information in management decisions. This information can include, but is not limited to, the information already provided in the SOE reports. The NEFSC is currently developing prototype stock-specific ecosystem data and reporting capability which can be tailored to needs identified by the Council and SSC.

In May 2021, an SSC ecosystem subgroup was formed (members include: Sarah Gaichas, Geret DePiper, Gavin Fay, Dave Secor, Mike Wilberg, Rob Latour, Wendy Gabriel, Yan Jiao, and Paul Rago). Possible tasks for this subgroup include:

1. Review and prioritize current ecosystem indicator work (analyses of indicators/groups, thresholds, etc) for the 2022 SOE report or prototype stock specific reports
2. Develop and test decision frameworks that use ecosystem information in setting Acceptable Biological Catch (ABC) for individual stocks
3. Provide scientific support for MAFMC's comprehensive review and update of EAFM risk assessment, and for the Council's use of SOE and risk assessment in strategic planning.

At present, the main MAFMC SSC decision for each stock is the level of scientific uncertainty (CV) in the OFL (overfishing limit; the catch associated with the fishing mortality threshold, typically a stock assessment output) which results in the ABC (catch level that sets an upper bound for the Annual Catch Limit). This decision includes an assessment of data quality, model appropriateness, retrospective analysis, empirical comparisons, ecosystem factors, recruitment trends, prediction error, informative levels of fishing mortality, and whether MSE has evaluated uncertainty. Therefore, identifying specific ecosystem factors and associated indicators that impact scientific uncertainty for individual and multiple stocks is critical to operational use of these indicators in the OFL CV decision. At its July 2021 meeting, the SSC included the results of the Northeast Climate Vulnerability Analysis (Hare et al 2016) in its assessment of ecosystem factors for OFL CV, in addition to any analyses conducted as part of the stock assessment.

The SSC subgroup could also consider and provide advice on the use of ecosystem information in estimating reference points and parameters for rebuilding depleted stocks.

The SSC subgroup is scheduled to meet 4 August, and an overview of the outcomes of that initial meeting will be shared with the Council during the 11 August joint meeting. The Council's iterative approach to developing the EAFM policy guidance, risk assessment, conceptual modeling, and MSE have been quite successful to date. We foresee continuing this iterative approach with regular consultations between the Council, SSC subgroup, and ecosystem data providers to achieve Council objectives.

For this discussion, it would be beneficial to get feedback from the Council on the types of ecosystem data/information, tools, or approaches that may be missing or would be informative to help support Council decision making, strategic planning, and priority setting (management and research). This input could help provide early guidance to the SSC subgroup, Council staff, and ecosystem data/model providers for consideration as they begin to develop new or updated ecosystem products.

Two concrete examples of the types of tools which could be developed are:

1) The North Pacific Fishery Management Council has used Ecosystem Status Reports to inform OFL and ABC setting for coming years - (https://doi.org/10.3389/fmars.2020.00703, https://academic.oup.com/icesjms/article/74/1/421/2669560).
2) California Department of Fish and Wildlife utilizes habitat compression and forage indices to inform their Risk Assessment and Mitigation Program for humpback whales, blue whales, and Pacific leatherback turtles - (https://wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries#559972749-2020-21-season)

Stock Rebuilding – Science and Policy Considerations:

Background:

Rebuilding a stock is one of the most difficult tasks in fisheries management and science. Science and management are inseparable; neither alone can provide a sufficient basis for rebuilding. Rebuilding must strike a balance between knowledge of stock dynamics and constraints imposed by legal requirements, management goals, and risk policy. Considerations include not only the usual specification of time lines, but also the more difficult policy challenges of dealing with unexpected changes. The essential feature of rebuilding is that multiple paths towards rebuilding are feasible and some may have lower economic impacts for stakeholders. Incorporation of economic factors in rebuilding plans could be an important advance.

Potential Considerations:

The SSC would appreciate further discussion with the Council and managers on the general topic of rebuilding. The upcoming challenges of rebuilding Atlantic Mackerel and Bluefish will bring these issues into sharp relief. Statutory guidelines for rebuilding start and end dates, as informed by current understanding of stock status and dynamics, constitute the primary policy guidelines. Beyond these constraints, policy issues include the desired probability of rebuilding within the period (e.g., a value greater than 50% may be desirable), application of the Council Risk Policy to interim fishing mortality rates during rebuilding, and responses to stock assessment updates within the rebuilding period.

Rebuilding timelines are conditioned on expected values of future recruitment, continuation of current growth and maturation rates, and no change in discard patterns. Interim stock assessments will reveal how well these assumptions are satisfied. If reality falls short of expectations, then what are the appropriate, feasible, and legal management responses, i.e., policy changes? For example, if recruitment is very low, the current fishing mortality rates for rebuilding would either need to be reduced or the length of the rebuild period would need to be extended. Similarly, a very strong year class can accelerate rebuilding but might cause excessive discards in some fisheries. This situation not only wastes fish but will change the assumptions under which the rebuilding targets were set. Uncontrollable factors could include harvests occurring in other jurisdictions and the efficacy of management efforts in some fisheries. Explicit consideration of the economics of rebuilding could lead to lower interannual fluctuations in landings and better economic returns during the rebuild period. Ecosystem factors may also be important for Atlantic Mackerel as it does fall under the Council's policy for forage species. Explicit consideration of this policy could have implications for target rebuilding probabilities.

In summary, the SSC would like to engage with the Council, GARFO and NEFSC to explore the policy aspects of rebuilding. Drawing upon experiences in other regions would also be helpful. We anticipate that such discussion will more result in more effective specification of ABCs and responses to unexpected changes in resource condition.