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New England Fishery Management Council

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MEMORANDUM

DATE: June 1, 2017
TO: Tom Nies, Executive Director
FROM: Scientific and Statistical Committee
SUBJECT: SSC meeting summary from May 25, 2017 meeting

The Scientific and Statistical Committee (SSC) met on May 25, 2017 in Boston, Massachusetts, to address a number of agenda items, namely:

1. Review the Council's draft 5-year research priority and data needs recommendations
2. NOAA Stock Assessment Improvement Plan (SAIP) / NFMS Framework for Best Scientific Information Available (BSIA)
3. NEFSC Ecosystems Status Report
4. Groundfish (Haddock research; Working group formation to set up "significant change" criteria; Plan B working group update)
5. Herring Management Strategy Evaluation presentation (Council staff)

To address these agenda items, the SSC considered the following information:

- 1.1 Council research priorities presentation
- 1.2 Draft NEFMC research priorities and data needs document
- 2.1 Implementing a next generation stock assessment enterprise document
- 2.2 Framework for determining that fishery management decisions are based on the best scientific information available document
- 2.3 State of the ecosystem report
- 3.1, 3.2, and 3.7 Mandelman et al haddock final report, addendum, and presentation
- 3.4 Research steering committee summary (March 23, 2017)
- 3.5 and 3.6 SSC responses (September 2015 and August 2016)
- 4.1 Herring MSE staff presentation
- 4.2 Herring MSE process document
- 4.3 Herring MSE technical documentation
- 4.4 Herring MSE workshop summary
- 4.5 Herring MSE PDT, AP, and Committee recommendations
- 4.6 Herring MSE workshop summary'
- 4.7 Herring MSE peer review report
- Correspondence – a Review of the use of optimum yield in US fisheries management

Agenda Item #1

The SSC received a brief presentation giving background on the various research priorities from the Council. The priorities were grouped into several focus areas including; fishery surveys, population dynamics, stock assessments, fisheries management, fishery performance and monitoring, bycatch, habitat, ecosystems, endangered/threatened/and protected species, and socio-economics. The SSC provides feedback on the various focus areas specifically and also offers some general comments on the process with thoughts on how to improve it.

Fishery surveys

The SSC notes that the elements in the fishery survey section were specifically about a few species, but the topics were applicable to a broader suite of species, so the suggestion is to simply remove the species listed and make the items noted apply broadly across the Council managed species. The SSC also recommends an additional research priority: investigation of common trends in survey information across species in an effort to determine the causation for these patterns. The SSC questions the calibration of the Albatross to Bigelow surveys for wolffish, noting that there was not adequate data available to do this calibration. The SSC suggests broadening the analysis to incorporate other survey information beyond the experimental calibration tows conducted across the two survey vessels. The SSC specifically suggested using datasets from the two surveys for the time periods in close temporal proximity to the calibration time period in an effort to increase the sample size of wolffish caught by the two surveys. The SSC supports the research item on NMFS trawl survey gear efficiency and investigating the use of a constant catchability assumption, noting that this applied broadly across species.

Population dynamics

The SSC notes that these topics are also applicable across a broader group of species than those mentioned in the text of the research priority document.

Stock assessments

The SSC questions why the winter flatfish survey was on the list as the survey had concluded many years ago. There was also a comment about how some of the research on the list was currently in progress, so it was unclear as to why these were still included on the list of priorities. There was support for investigating the use of the Bigelow survey as a separate survey index in stock assessments, but this has been completed for some assessments.

Fisheries management

The SSC recommends an additional research priority to investigate the potential testing of F ramp procedures. There was also a comment made to make management strategy evaluation (MSE) more explicit in some of the topics in this section. The SSC recommends that MSE should be more explicitly included in some of the control rule items.

Fishery performance and monitoring

The SSC only made some general comments in this focus area, which are described later in this report.

Bycatch

Research topics in this section have broader applicability than the species named explicitly. The SSC notes that scallops was removed as a species of focus from this section, but bycatch in the

scallop fishery was still an active and important area of research (e.g., in the scallop RSA research priorities), so it should be retained in this research focus area.

Habitat

The SSC recommends that there is a need for research on tradeoffs between habitats and fisheries by quantifying the value of particular habitats in the context of the fishery that interacts with it. An important contemporary example would be to quantify the tradeoffs between deep sea coral habitat protection and offshore lobster fishing.

Ecosystems

The SSC suggests research on optimum yield in an ecosystem context so this might be better accounted for as ecosystem approaches to management become more widely used. The SSC also recommends that the research topics on climate change should be a stronger area of research focus in this section. The SSC agreed with the Council staff recommendation that the marine spatial planning topic was too ambiguous and should be better defined or removed. The items in this section are also applicable to a broader set of species than referenced in this section.

Endangered, threatened, and protected species

The SSC did not make any comments for the items in this section.

Socio-economics

The SSC recommends that research to better characterize fisheries under the Council's purview was needed so that economic risk could be quantified when implementing various management measures. The SSC suggests that many of the previous research topics discussed in the research priority document could have an economic element added to them. The research priorities in this area of focus was short given the need for information on these topics. Some research on the sale and marketing of fisheries products would be an important area of research, because little is known about this component of economics in fisheries. The SSC suggests that it would be worthwhile to conduct economic research on impacts after a management decision is completed and implemented.

General comments from the SSC

The SSC noted that the 'bottom-up' approach resulted in research priorities that are specific to the species of interest for the committees who generated the lists, however many of the research priorities have broader applicability. The SSC agrees that input from Council committees and Plan Development Teams was appropriate, but a general synthesis would meet the grander scope of the Council's needs. The SSC also notes that many of the items in the research priority document were not believed to be research items. SSC feedback on the research priorities was limited by the lack of context for many of the items. The SSC repeats its previous recommendation that prioritizing the list would be beneficial for addressing the research needs, but the SSC cannot suggest priorities without additional information. The SSC suggests that progress toward previously reported research priorities should be considered to make room for new priorities.

The SSC recommends that developing a research committee, or potentially broadening the mission of the Research Steering Committee, would be valuable, because this committee could prioritize and synthesize the various lists provided by Council committees. The committee could include membership from the Council, Plan Development Teams, SSC, and NEFSC staff. Such a process for review and providing final comments would be more effective.

Agenda Item #2

Dr Patrick Lynch gave two presentations to the SSC, one on the NMFS stock assessment improvement plan (SAIP), and one on best scientific information available (BSIA). He stated that the SAIP will guide the next 10 – 15 years of NMFS stock assessment work and describes the vision for the next generation of stock assessments as being able to include ecosystem and socioeconomic drivers. The process highlights two tracks of assessments, operational and research track assessments. On the BSIA document, it was stated that the objective is to establish a clear process for determining what BSIA is in specific situations.

The SSC noted that the SAIP was focused on data-rich assessment techniques and suggested that there needs to be more focus on data-poor assessments. Additionally, the SSC recommended further development of approaches to incorporate stakeholder input. Another SSC comment was that there was not much discussion on what to do with assessments with diagnostic problems such as retrospective issues, this would be helpful to address moving forward. A final comment was that the next generation of assessments should include an integrated system, meaning you have a system that offers different methods depending on the information that is available.

On BSIA the SSC questioned how this document related to the NS2 guidelines. It was noted that there was technical guidance being developed to allow the BSIA document to support NS2 guidelines. The SSC also noted that the BSIA document characterized the current state of how BSIA was being used, but was not forward looking as it does not leave much room for ecosystem and socioeconomic metrics.

Agenda Item #3

The SSC received a presentation on the NMFS state of the ecosystem report by Sean Lucey. The report covers numerous metrics across a wide spectrum of ecosystem indicators. These reports were being tailored to the different regional Councils, so the presentation and report covered a number of indicators relevant to the NEFMC. This agenda item provided an opportunity for the SSC to comment on additional information they wish included in the report so that the report could be better tailored to the needs of the NEFMC process and provide the SSC with information germane to its deliberations.

The SSC noted that the report was very useful and would be valuable for ecosystem considerations during their deliberations. One comment was to make the report a citable document (i.e. make it a center reference document) so that it could be used by not only the SSC but other stakeholders as well. The SSC notes that the report assumed that “unknown status” stocks are not meeting objectives, which is not necessarily true. The SSC suggests that some of the metrics could be included in a multivariate way in order to visualize trends across multiple species and species groups. The SSC noted that there is no clear definition of a healthy ecosystem, so it could be a challenge to derive a reference level or target for each metric. The SSC also suggests that the report should more explicitly integrate ecosystem impacts, or provide examples of how it might be integrated, within the assessment process. The SSC requested a subsequent review of the report at a future meeting as well as annual reviews of updated reports.

Agenda Item #4

The SSC covered three separate topics under this agenda item. The first was a review of research on recreational haddock discard mortality. Dr John Mandelman and Connor Capizzano presented their research of this topic. The research used tagging information to determine the level of

discard mortality on haddock in situ as opposed to traditional mortality experiments that are done in the lab or using caged fish. The main findings of the report are that the season when discards occur and the size category of the fish being discarded are both significant factors in the mortality rate. The SSC had a number of suggestions for the researchers, and the exchange of ideas was of mutual benefit to both the researchers and the SSC. The point of the SSC review of this research was to recommend how the research can be used to inform the next benchmark assessment for haddock. The recommendation from the SSC was that discard mortality information generated from this study was appropriate to consider during the next benchmark assessment for haddock. Estimates of recreational dead discards (assuming 50% discard mortality) have been approximately 1/3 of total catch of haddock in recent years. The revised discard mortality assumptions could have considerable influence on the assessment, particularly in the context of recent strong recruitment signals in the assessment. A suggestion and a caveat were offered along with this recommendation. The suggestion was to consider temperature as a more proximal effect than season. The caveat was that this was a single year study, so it was recommended that this research be updated in future years, noting that the SSC thought this was important enough to warrant additional funding to repeat the experiment and test whether the rates and model effects were consistent through time. A final note from the SSC was that as of the current assessment information, the discard mortality rate used for haddock is not based on a species specific experiment, but rather is based on informal discussions with stakeholders. The SSC believes that this research is a step forward in the understanding of haddock and will benefit the assessment process.

The next topic was on defining what a “significant change” is in the context of SSC deliberations on specification setting. Council staff gave some background on the issue, the main point being that this issue came up for yellowtail flounder and the SSC struggled to be consistent with previous advice given the ambiguity of what a significant change in survey indices meant. The point of this agenda item was to gather volunteers for a working group to address this issue. Several SSC members volunteered (S. Cadrin, P. Sullivan, and J. Wiedenmann). The goal would be to convene the group and develop techniques to address the issue. The working group could then extend the work by commenting on how the techniques could be used in the context of the Councils risk policy, and could also ensure it interacts positively with the TRAC recommendations. Several ideas were offered for defining “significant change” during the previous SSC meeting where this item was discussed.

The final item was an update on the Plan B working group discussions. The so called Plan B assessments are assessments that can be used for developing catch advice when the preferred analytical approach fails by way of lack of converging on a solution or poor model diagnostics. The Plan B working group is researching ways to better prepare for Plan B approaches during the assessment process. This group had met via conference call on two occasions, they reviewed some existing procedures for Plan B approaches, and they are developing a white paper for review at the NRCC meeting in June. The SSC will review the work of this group as it is developed.

Agenda Item #5

Council staff presented a summary of the herring MSE process to date per the request of the SSC. There was some interest by SSC members to engage and provide comments on the MSE, but the agenda item occurred at the end of the meeting and was not conducive to accommodating numerous comments and recommendations. The SSC notes the lack of economic risk incorporated in to the MSE process, specifically the lack of economic risk to related inshore

fisheries external to the herring fishery (e.g. bluefin tuna, striped bass, groundfish). One SSC comment suggests there are ways to define economic loss within the context of the MSE for the herring fishery that do not depend on defining things like localized depletion, they can focus at a higher level if there is evidence of fisherman changing or reducing fishing activity. The SSC requests the opportunity to provide input at a future meeting.

Summary

In summary, the SSC recommendations from this meeting are:

- The SSC provided comment on the Council's research priorities. A change in process was recommended by the SSC to improve future prioritization of research and SSC recommendations to the Council.
- The SSC provided comment on both the SAIP and BSIA documents, and the SSC recommends the Council facilitate a forum for detailed public comments to NMFS on the documents.
- The SSC should review the ecosystem status report at a subsequent SSC meeting to provide further feedback on the metrics and indices. The SSC also recommends receiving an annual review of updated status reports.
- The SSC concluded that the haddock discard mortality research is appropriate to consider during the next benchmark assessment.
- The SSC recommends convening a "significant change" working group so they may provide advice for upcoming SSC deliberations.
- The SSC should offer additional feedback on the herring MSE.