



## New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116  
E.F. "Terry" Stockwell III, *Chairman* | Thomas A. Nies, *Executive Director*

### MEETING SUMMARY

#### **Ecosystem-Based Fisheries Management Committee**

Holiday Inn by the Bay, Portland, ME

March 30-31, 2015

The Ecosystem-Based Fisheries Management (EBFM) Committee received a progress report and provided feedback on developing scientific advice for Draft Amendment 8 on an Atlantic herring ABC control rule to account for forage considerations and herring's role in the ecosystem. The EBFM Committee also received a report from Council and GARFO staff outlining various procedures that might be used to develop EBFM policy and their characteristics. One of the methods was chosen as the foundation for a process that the Committee will propose for approval at the April Council meeting. Finally, the committee revised a draft letter that comments on NOAA Fisheries Draft Climate Strategy, which will be recommended for approval at the April Council meeting.

#### ***Day 1***

***MEETING ATTENDANCE:*** Terry Stockwell (Chairman), Mike Sissenwine, Frank Blount, Doug Grout, David Pierce, John Pappalardo, David Preble, Mary Beth Tooley (Committee members); Andrew Applegate and David Thomas (NEFMC staff), Carrie Nordeen (GARFO), Mitch McDonald (GCNE), and Rich Seagraves (MAFMC staff). Public attendance included Meghan Lapp, Judd Crawford, Catherine King, Priscilla Brooks, Chris Weiner, Ben Martens, John Williamson, and Erica Fuller.

***AGENDA ITEM: Progress report and discussion about developing scientific advice for Draft Amendment 8 on an Atlantic herring ABC control rule to account for forage considerations and herring's role in the ecosystem.***

Mr. Stockwell opened the meeting and asked Mr. Applegate to present a summary of the agenda and progress on the herring control rule. The schedule for the development of scientific advice was outlined up to the June Council meeting. Mr. Applegate explained that the advice document will include sections describing the problem statement and objectives, the management background on forage species management, an evaluation of the characteristics of various forms of control rules from a simulated herring stock, the ecological and economic implications, with conclusions and recommendations. He said that the ecological and economic implications are likely to be general or qualitative, rather than quantitative, because the various multispecies models for this region have not been fully parameterized, verified, or peer reviewed.

Mr. Preble asked if there was any way to analyze the year-to-year effects to apply to forage species management. Mr. Applegate responded that while the general idea of forage species management is understood, it'd be difficult to get precise year-to-year data as of now. Mr. Pappalardo commented on November's EBFM motion, noting that an Atlantic herring assessment is not going well and may not be approved. He wondered whether we could look generally at all species as a guild rather than focusing on one single species. Mrs. Tooley thought that the process was not lined up well enough to allow the final benchmark assessment results to be of use to the EBFM PDT to develop scientific advice for control rules. She emphasized that Amendment 8 should include common sense and simple approaches for forage management. Mr. Applegate explained that the assessment results were not really necessary for the EBFM PDT to develop advice, because the control rule should be evaluated over a wide range of resource conditions.

Dr. Sissenwine thought that a control rule for herring could be distinct from policies for overall forage management. For herring, he recommended that a control rule should be designed broadly enough to incorporate assessments with a lot or a little data. He suggested that the limit should not be based on maximum sustainable yield (MSY), but rather relate to natural mortality (M) as a fraction or proportion of that value. About the assessment, he thought that setting a limit based on historic catch might be entirely arbitrary and not be suitable for the current resource level and other conditions.

Mrs. Tooley added that the control rule should be simple and follow common sense principles. Dr. Pierce was concerned that the control rule would set aside a specified amount for predation based on their stock size projections, much like the system applied to the Canadian catch of transboundary stocks. He felt that localized availability of herring was a greater concern.

Mrs. Tooley thought that the availability of herring for tuna forage was a social consideration and should not be managed by an ABC control rule. To make her point, she explained a tradeoff between less herring for lobster bait and more herring to be available to attract tuna. She thought that the ABC control rule should be developed to be consistent with a total forage base. Mr. Pappalardo also favored the development of control rules that reduced ecosystem risk. He thought the Council should scuttle spatial or temporal consideration of herring availability via an ABC control rule. Dr. Pierce recommended that the Council pursue a simple control rule, following the example for menhaden that Micah Dean had developed for the ASMFC.

Mr. Preble spoke about the forage issues for tuna and thought that the Committee's decisions need to be in favor of the species' productivity. He was uncomfortable with the suggestion about setting the catch limit based on natural mortality (M), because M is often an assumed value and often modified.

Mr. McDonald said that the relationship of a control rule to MSY is rooted in the National Standards. He thought that since consumption is explicitly incorporated into the assessment, then the estimate of MSY already takes predation into account (and a separate type of control rule is unnecessary).

Chris Weiner commented that the assessment did not have an accurate assessment of consumption. He noted that the high abundance of herring was inconsistent with his observations as a fisherman, gathered over a wide area. He said that the large schools of herring that he observed 10 or more years ago no longer existed anywhere in the Gulf of Maine or on Georges Bank. Steve Weiner urged the committee to be careful with specifying the required forage base, because it is very important to very valuable fisheries.

Mr. Pappalardo asked why the operational assessment wasn't working. He thought that the only way to "fix" the model is to change the assumptions at the beginning. Ms. Nordeen replied that the model diagnostics were not acceptable, a retrospective pattern and a likelihood constant factor.

***AGENDA ITEM: Evaluation of and discussion about available procedures to develop and implement EBFM policy, based on a staff discussion document.***

Since the committee discussion on the herring control rule went quicker than expected, Mr. Applegate was asked to present the EBFM discussion document to the committee, with time for questions of clarification. Mr. Stockwell recommended that the committee should hold off debate on the merits of various procedures until the next morning, after the co-author, Tobey Curtis, was available to answer any additional questions the committee may have.

Mr. Applegate began with a summary of the EBFM Committee's previous work up to this point and what processes and methods the Committee could undertake going forward. These approaches include Ecosystem Approach Policy documents (EAFM), an example Fishery Ecosystem Plan (eFEP), an Implemented Fishery Ecosystem plan (iFEP), and a Blended Fishery Ecosystem Plan (bFEP) which could be implemented via an Omnibus Amendment. Referring to the discussion document, Mr. Applegate gave a brief overview of each approach, as well as the pros, cons, and characteristics of each approach.

For clarification on the discussion document, Mr. Grout asked how the bFEP approach would not have the jurisdictional concerns inherent in some of the other approaches. Mr. Applegate replied that the jurisdiction would remain the same as it is now, because that approach would modify, not replace, existing plans. He thought that ecosystem management principles could be implemented in separate plans by separate authorities, but it would require interagency discussion and cooperation.

Dr. Pierce noted the potential issues that could arise with management boundaries if the current FMPs were broken down into ecosystem units. Mr. Applegate explained that although some evaluations have been made to define ecological units based on biological characteristics, the boundaries of how the ecosystems would be managed are still open for debate and discussion.

Mr. Sissenwine noted that there are issues around the current management boundaries, and that the ecosystem units could be proportioned to best suit management needs. He thought that it would be best to deal with the biological characteristics of ecosystem production units and then aggregate or parcel out to defined management units as needed.

He then explained his expectation that the example EBFM plan would incorporate the model results into a set of regulations that the Council could implement. Mr. Pappalardo thought that a policy with goals and objectives would need to be developed in order to support one of the approaches. Mr. Preble agreed that the Council needs to develop a conceptual framework having policies, goals, and objectives that lead to where we need to go with management. Dr. Sissenwine added that an eFEP could provide an essential first step to develop something sensible and tangible that stakeholders could comment on and provide input, rather than something theoretical.

Ms. Fuller asked about the level and importance of public comment and participation in each of the processes. Mr. Crawford asked if the process could develop a program that is out of sync with changes in regulations. He thought that clear goals need to be developed, identifying stakeholder goals to develop a plan that strikes a reasonable balance.

Mrs. Tooley thought that it would be helpful to develop policy examples, allowing time to evaluate the jurisdictional issues. Mr. Grout added that an eFEP could react to short-term conditions, but he thought evaluating long-term impacts would require actual implementation. He asked whether such a plan or model could be tested using existing data. Mr. Applegate replied that such a framework could be developed and evaluated in the context of a Management Strategy Evaluation (MSE) but it would take some time to incorporate existing conditions and evaluate what would happen if the proposed framework was applied and compare it to the outcome under the current management system. He thought that it might be possible to evaluate the strategies as well in an historical content using existing data.

Dr. Pierce asked whether and how NMFS would support such an example ecosystem plan. He thought it would promote creative approaches to true ecosystem concerns. Mr. Applegate replied that he had been told by Dr. Link and Dr. Abrams that the NEFMC would have NMFS full support as long as it would lead to a new approach that could be implemented.

## ***Day 2***

***MEETING ATTENDANCE:*** Terry Stockwell (Chairman), Mike Sissenwine, Frank Blount, David Pierce, John Pappalardo, David Preble, Mary Beth Tooley (Committee members); Andrew Applegate, David Thomas and Tom Nies (NEFMC staff), Tobey Curtis (GARFO), and Rich Seagraves (MAFMC staff). Public attendance included Judd Crawford, Patrick Paquette, John Williamson, Priscilla Brooks, Susan Faraday, Steve Weiner, Meghan Lapp, Ben Martens, and Erica Fuller.

***AGENDA ITEM: Evaluation of and discussion about available procedures to develop and implement EBFM policy, based on a staff discussion document. (Continued from Day 1)***

Mr. Stockwell opened the meeting by asking for questions for Mr. Curtis, or comments that he would like to give to the committee. Answering a question from the Committee, Dr. Curtis explained that GARFO does not have a preferred approach at this time, but it was essential that it lead to a plan that could eventually be implemented, an applied framework rather than theoretical. Dr. Pierce asked Mr. Curtis if GARFO consults Dr. Link for guidance or

information, and Mr. Curtis explained that there hasn't been any direct interaction. Mr. Applegate replied that before he took on new duties, Dr. Link had been on the EBFM PDT and has made himself available as needed since then.

Mr. Pappalardo informed the Committee that the team led by Dr. Fogarty may be reassigned within the Center. He also stated that there should be discussion on how the ecosystem plan would be created, and what steps would be taken to enact it.

Dr. Sissenwine thought that the best approach would be to develop an example, because it would need to be based on a trophodynamically-based scientific perspective and would require some iterations to perfect, before implementation. One approach, he suggested, would be to specify multispecies MSYs that are area specific. He stressed that these models would need to recognize tradeoffs inherent in catching various amounts of different stocks, like we are doing for the herring amendment. In contrast, our current management includes rebuilding plans that are assumed to be unaffected by environmental conditions and other species. As an example, he suggested that the operational management of haddock would be the same [as currently exists], but the reference level would be an ecosystem [rather than a single stock] property.

Mr. Preble added that the trophodynamic system would also have a relationship to habitat quality. Dr. Pierce thought that an iFEP is the ultimate goal, but we are not yet ready. He also said that it was not clear that the MAFMC approach would lead us in the right direction either. In contrast, he thought that applying EAFM policies through adopted Council policies and/or amendments to existing plans would not ensure enough ecosystem context for management. It would lead to separate planning by management plan, rather than by area. He agreed that an eFEP would be an essential interim step to lead to an eventual iFEP.

Mr. Seagraves explained that the MAFMC's approach to EBFM. He explained that they considered the Pacific Council's model and wanted to build in ecosystem considerations through existing FMPs. He explained that the MAFMC is still in the middle of a multi-year effort, and they intend to develop an ecosystem guidance document by the end of the year.

Mr. Applegate, providing clarification about the description of the EAFM approach, explained that the Council could follow the approach to develop a general forage fish policy, as the Council is partially doing through the draft herring amendment.

Dr. Preble asked how the jurisdictional issues would be managed. He was concerned about the different approaches and authority to manage by species split between the NEFMC and MAFMC and asked if those councils would be able to co-manage these species in an eFEP. Dr. Pierce noted the Committee would have to deal with movement between the EPU's, and noted his favor for the eFEP approach.

Mrs. Tooley noted that the Committee needs to be able to develop a plan to incorporate public input moving forward. She thought that the jurisdictional issues could be managed outside of the management decision process. Mr. Preble added that the EBFM framework should include a draft list of goals and objectives. Mr. Pappalardo asked how this eFEP process would incorporate a public input or scoping process, either informally or as a formal step.

Dr. Sissenwine replied that he favored developing a working example as a deliberate step leading to a management plan that would be implemented. It would serve as a well-developed framework and actionable example of how the iFEP would work, something tangible that the public could provide valuable input. The timing and type of scoping or public input would be developed as a next step in that process. The scope of the plan would include issues like trophodynamic considerations, bycatch, climate effects, and habitat quality.

**MOTION 1:** Dr. Sissenwine moved (seconded by Mr. Blount): that the NEFMC prepare

1. a policy describing goals and objectives, and approaches, for taking account of ecosystem processes in fishery management, and
2. an example of a fishery ecosystem plan that is based on fundamental properties of ecosystem (e.g., energy flow and predator/prey interactions) as well as being realistic enough and with enough specification such that it could be implemented. The example should not be unduly constrained by current perceptions about legal restrictions or policies.
3. With respect to number 2, it is understood that the example might not be implemented, but it should make clear what an fishery ecosystem plan would actually entail and it should focus debate. To the extent practicable, these documents should be completed in about one year. In consideration of these documents, the Council will adopt a plan for implementation. The the Ecosystem Based Fishery Management Plan Development Team will have the technical lead in developing these documents and the EBFM Committee will recommend the documents for Council consideration.

#### **Discussion on the Motion:**

Commenting on the motion, Mr. Crawford said it was encouraging that the Council is committing to a path to actual policy and implementation. He agreed that the process in the motion should be an integral path to an iFEP, not a rejection of it. He also added that public scoping should be an important element of it.

Mr. Paquette commented that the public would be able to understand the issues that the Committee has discussed. He was also concern that the Committee is discussing issues they think the public would not be able to understand. Dr. Pierce also noted the motion should distinguish between examples and implementation. Mrs. Tooley asked if Dr. Sissenwine thought that trophic interactions are the most important component in the motion. Dr. Sissenwine replied that the motion could be adjusted to reflect all the components.

Dr. Preble recommended that the fundamental concepts should be put out for public comment as quickly as possible. Mrs. Tooley agreed that public input is important, but that this direction is one that no other Council has yet followed. She added that the motion does not rule out other issues such as climate change.

**The motion carried 6-0**

Mr. Stockwell continued the meeting by initiating discussion on the scoping process. Mrs. Tooley suggested that the Committee should do additional work before the scoping process to ensure the appropriate questions for public input are being asked. She noted that the Council has already conducted surveys and workshops and Dr. Beidron has presented a summary of stakeholder perceptions of EBFM. She thought that at this juncture, the Council needs to begin asking the public a different kind of question to seek input. Dr. Pierce added that having a specific example of what EBFM would look like in this region would be an essential tool.

Mr. Applegate informed the Committee that NH Sea Grant had expressed an interest in setting up a workshop or forum on ecosystem-based fisheries management in New England. He said that although there were concerns about time demands for this effort, it would be very useful as an integrated component in the Council's ecosystem planning and development. He said that he had discussed the concept with Eric Chapman, who had been very receptive to the idea. The Committee thought that this was a good idea and encouraged further development.

***AGENDA ITEM: Develop and recommend comments on NOAA Fisheries Draft Climate Strategy***

For the committee's consideration, Mr. Applegate presented a draft letter commenting on the NOAA Fisheries Draft Climate Change Science Strategy, based on the few comments he had received from Council members.

He explained that outcome would mostly depend on the actual development and implementation of the plan, so the initial draft commented on the objectives. He said that the draft emphasized the importance of Objective 1, evaluating how and what corrections need to be made to reference points that might be mis-specified due to climate change. He also recommended that the Committee consider commenting to add a new objective to investigate the direct relationship between climate change and oceanic effects, making that information available to evaluate cumulative effects of land-based activities that have an effect through this mechanism. He suggested another objective to evaluate ways of reducing the climate effects of fishing activities and related energy use, to identify management policies and other changes that could reduce the "carbon footprint" of the fishing industry.

Mr. Blount indicated that many of the processes described in the plan would take a long time to complete. Dr. Pierce noted a part of the letter that seemed to indicate that fishing is causing climate change, stating that that is not the case. This part of the letter was struck and replaced with additional content from Dr. Pierce about prioritizing funding for traditional assessment science versus funding for climate change science. He added that without the critical survey and assessment information, climate science would have nothing to be based on. After these edits were accomplished, the following motion was made:

**MOTION 2:** Mr. Preble moved to (seconded by Mr. Blount):

Recommend the draft letter of comments on climate change science strategy to the Council for approval.

**Discussion on the Motion:**

Mr. Crawford commented that funding for EBFM development is limited, and recommended that the letter advocate additional funding for EBFM development as a component of climate science research.

**The motion carried 6-0.**

Mr. Stockwell ended the meeting at 11:03 AM.

DRAFT