

NEW ENGLAND FISHERY MANAGEMENT COUNCIL

Final Report

Herring Plan Development Team (PDT)

Ecosystem-Based Fisheries Management (EBFM) PDT

January 5, 2015

Holiday Inn, Taunton, MA

The Herring Plan Development Team (PDT) met jointly with the Ecosystem-Based Fisheries Management (EBFM) PDT on January 5, 2015 at the Holiday Inn, Taunton MA. The morning session was a joint meeting between the two PDTs. The afternoon session was a Herring PDT meeting. The purpose of the meeting was to: review/discuss the Action Plan and timeline for an Amendment to the Atlantic Herring FMP to consider forage-based control rules for herring, as per the November 2014 Council motion (Joint EBFM PDT/Herring PDT); review/discuss the Action Plan and timeline for the 2016-2018 Atlantic herring fishery specifications (Herring PDT); discuss cooperative research priorities for potential 2016-2018 research set-asides (RSAs); develop Herring PDT recommendations; and discuss options under consideration to address observer coverage on herring vessels in omnibus Industry-Funded Monitoring Amendment (Herring PDT). The Herring PDT also briefly discussed the Council's Risk Policy, adopted at the November 2014 Council meeting.

Meeting Attendance: *Herring PDT Members:* Lori Steele, NEFMC Staff (Herring PDT Chairman), Rachel Feeney (NEFMC Staff); Matt Cieri (ME DMR), Micah Dean (MA DMF), Sara Weeks (NEFOP); Min-Yang Lee and Jon Deroba (NEFSC), Madeline Hall-Arber (MIT Sea Grant), Brant McAfee and Carrie Nordeen (GARFO), Melissa Yuen (ASMFC).

EBFM PDT Members: Andy Applegate, NEFMC Staff (EBFM PDT Chairman); Kiersten Curti, Sarah Gaichas, Mike Fogarty, Geret DePiper (NEFSC);

Others: Jeff Kaelin, Mary Beth Tooley, Chris Weiner, Steve Weiner, Ray Kane, Katie Almeida, Judd Crawford, Erica Fuller.

Webinar: Renee Zobel, Herring PDT (NHFG); Peter Auster, EBFM PDT.

KEY OUTCOMES

- The joint EBFM PDT/Herring PDT reviewed the Draft Action Plan for Amendment 8 to the Herring FMP, which will establish a control rule for acceptable biological catch (ABC CR) in the Atlantic herring fishery. There was general consensus among the PDTs that the issues raised during the scoping process will be important to consider, and that the Council's objectives for the Atlantic herring ABC CR are not very clear at this time. The PDTs agreed to seek clarification from the Council regarding the management objectives for the herring ABC CR.
- The EBFM PDT agreed to first identify general approaches and discuss the types of analyses that could be developed in the given time frame. The PDT will begin developing a document that outlines various approaches for a discussion regarding management objectives, for further discussion at the upcoming EBFM PDT meeting.

- The Herring PDT reviewed the 2014-2015 research set-aside (RSA) priorities identified by the Council and agreed to support these priorities for any RSA that may be allocated during the upcoming fishery specifications process.
- The Herring PDT reviewed the analyses provided by the NEFSC to support an option to target observer coverage such that a 30% coefficient of variation (CV) be achieved for river herring and shad catch estimates. To be consistent with the standardized bycatch reporting methodology (SBRM), the Herring PDT agreed that the RH/S CV option could be based on the most recent year of fishery information in order to determine coverage targets for the upcoming year.

Detailed minutes of the January 5, 2015 Herring PDT/EBFM PDT meeting are provided below.

Amendment 8 (Herring FMP) Discussion: Action Plan and Timeline (Herring/EBFM PDTs)

Ms. Steele presented the Draft Action Plan for Amendment 8 to the Herring FMP, which will establish a control rule for acceptable biological catch (ABC CR) in the Atlantic herring fishery. Ms. Steele and Mr. Applegate suggested that for this discussion, the EBFM PDT and Herring PDT should focus on the Amendment 8 process, the timeline, the roles of the two technical groups, and the interaction between the two PDTs. Mr. Applegate also noted that issues related to the upcoming operational stock assessment for Atlantic herring may affect the EBFM PDT's work (discussed in more detail during the meeting). Mr. Applegate and Dr. Deroba briefly discussed EBFM PDT access to stock assessment data, which Dr. Deroba agreed to help provide for the purposes of the EBFM analysis.

Mr. Applegate generally summarized the EBFM PDT's role in the Amendment 8 process – the EBFM PDT will develop guidance regarding the Atlantic herring ABC control rule, which will be reviewed by the SSC, presented to the joint Herring and EBFM Committees, and then forwarded to the June 2015 Council meeting. The EBFM PDT guidance will then go forward to the Herring PDT and Herring Committee for the development of ABC CR alternatives in Amendment 8. The application of the ABC CR would be addressed for interim years in the amendment document (if implemented mid-specifications) or in a subsequent fishery specifications process. Dr. Fogarty emphasized the need to differentiate between addressing forage in the stock assessment and addressing management issues through the development of a control rule as the group moves forward. He stated that the EBFM PDT will need to wrestle with the issue of risk as it relates to the herring catch harvest policy versus the food web and the marine ecosystem. Dr. Cieri expressed concern about challenges that may arise with the analyses if the upcoming stock assessment for herring encounters problems.

Dr. DePiper asked how the Risk Policy Working Group (RPWG) work may relate to or inform the EBFM PDT and Herring PDT work. He expressed concern about the potential for efforts to be duplicated, given that several technical bodies are concurrently addressing this issue. Ms. Steele briefly summarized the work that the RPWG may undertake to develop recommendations regarding the application of the Council's risk policy to the Atlantic Herring FMP. Dr. Deroba stated that Atlantic herring was selected by the RPWG as a working example to develop general recommendations related to the Council's risk policy and that any simulation work should help to inform the EBFM and Herring PDTs but shouldn't duplicate, as the RPWG work is more

general. He noted that several members of the RPWG also serve on the Herring PDT, which should reduce the potential for duplicative efforts.

While reviewing the Amendment 8 Action Plan, the PDTs spent considerable time discussing the motion from the November 2014 Council meeting:

That for herring priorities, the council prioritize an amendment to consider control rules for the Atlantic herring fishery that account for herring's role as forage in the ecosystem. The Council should also task the EBFM PDT and committee with developing ecological guidance for the herring PDT on managing forage fish within an ecosystem context by the June 2015 NEFMC Council meeting, and participating in the development of an appropriate control rule and reference points within an EBFM context for the herring fishery during this amendment.

Dr. Gaichas asked for clarification regarding the Council's management objectives for the ABC CR. Another PDT member stated that the motion appears to identify a solution before a specific management objective. Dr. Gaichas noted that the Amendment 8 scoping process is scheduled to occur while the EBFM PDT develops its guidance, but the outcome of scoping may be important in terms of determining what the specific management objectives may be. She expressed concern about moving forward developing technical guidance and related EBFM analyses before the objectives can be clarified. Several PDT members agreed that the Council motion is silent regarding the management objectives for the ABC CR. For example, one objective could be related to the risk of depletion that negatively affects stocks that rely on Atlantic herring. Another objective could be related to what extent that providing additional herring as forage may aide in the rebuilding of depleted stocks that rely on herring. There are many ecological and economic tradeoffs to consider when developing control rules. Dr. Cieri added that it is difficult to try to identify the important issues and analyze them at the same time, as factors like scale can significantly affect the analysis if not clarified up-front.

There was general consensus among the PDTs that the issues raised during the scoping process will be important to consider, and that the Council's objectives for the Atlantic herring ABC CR are not very clear at this time. Ms. Steele noted that scoping is scheduled to occur March/April and suggested that while the issues raised during scoping will be important, many of them have been raised before and can be identified now, although perhaps not prioritized. **The PDTs agreed to seek clarification from the Council regarding the management objectives for the herring ABC CR as soon as possible.** Ms. Steele stated that the Council is scheduled to approve the Amendment 8 Scoping Document at its January 2015 meeting and suggested that this issue could be raised in the context of the scoping document. However, she expressed doubt that the Council would provide the clarity that the EBFM PDT may be seeking in a brief discussion at the January Council meeting. She asked the group to be clear in terms of what further guidance it may be seeking from the Council at this time.

Dr. Gaichas suggested that the Council provide guidance regarding the tradeoffs to consider when developing a herring ABC CR in an ecosystem context. What is the balance that the Council is seeking? Why does the Council want to consider forage needs for the herring ABC CR? What are the most important tradeoffs to evaluate? Ms. Steele noted that these issues are

raised in the Amendment 8 scoping document and felt that it may not be possible for the Council to clearly address these questions at this time. The PDTs again expressed concern about moving forward with technical analysis prior to scoping.

Dr. DePiper suggested that as one possible way to move forward, the PDT begin by constructing some general approaches and discussing what may be achievable in an EBFM context by modifying the Atlantic herring ABC CR. He encouraged the PDT to develop an outline or list of approaches/issues for the Council to consider when discussing this issue, versus presenting the Council with an open-ended question, so that the discussion can be more focused and productive. Dr. Fogarty and other PDT members agreed with this approach. Dr. Fogarty also suggested that the EBFM PDT needs to take into account that Atlantic herring is not the only forage species in the ecosystem. A lot of predators are opportunistic feeders, but some are specialists and rely more on herring in some times/places, for example, bluefin tuna. He suggested that the group may want to focus on predators, mammals, and birds that are known to have a preference for herring in their diet; this may be one way to organize the approach and focus work/effort on the role of herring in the ecosystem. **The EBFM PDT agreed with this and felt that it may be helpful to first identify general approaches and discuss the types of analyses that could be developed in the given time frame.** Mr. Applegate offered to begin developing a document that outlines various approaches for a discussion regarding management objectives, for further discussion at the upcoming EBFM PDT meeting.

Several audience members provided comments:

- Ray Kane requested that the RPWG Report be presented to the Council by a “neutral party.”
- Ms. Fuller stated that her understanding of the RPWG work indicated that there would not be overlap with the EBFM PDT work, as the RPWG will not be developing specific ABC CR alternatives. She also noted that the Council has requested guidance from the EBFM PDT by the June 2015 Council meeting, not specific numbers and model results. She feels that Council is seeking guidance to answer the very questions that the EBFM PDT is raising at this meeting. She encouraged the PDT to begin work now and stated that the outcome of scoping is not going to the need to consider a range of alternatives, and she felt that work on developing these alternatives should start now.
- Mr. Crawford noted that issues related to identifying goals and objectives for ecosystem-based approaches has been grappled with by other management bodies and encouraged the group to review some of the documentation related to these efforts (menhaden, for example). He suggested that the PDT also could provide some example goals and objectives and describe the technical work that would be required to develop the CRs.
- Mr. Kaelin encouraged the PDT to provide the Council and the public with more information about what is available in the ocean for forage versus what is made available for harvest. He also encouraged the PDT to review the goals and objectives for the Atlantic herring management program in the Herring FMP.
- Mr. Weiner expressed concern about localized depletion and the need to provide more herring for forage in some times/areas. He also encouraged the EBFM PDT to move forward with addressing this issue and providing some of the focus that the Council needs to make decisions in Amendment 8.

Atlantic Herring Operational Assessment Issues

Dr. Deroba briefed the EBFM and Herring PDTs regarding some of the issues related to the upcoming operational (update) stock assessment for Atlantic herring, scheduled for spring 2015). He generally described the results of initial investigations of the assessment model performance and noted the re-emergence of a significant retrospective pattern. Moreover, he identified an important technical issue with the likelihood function used in the ASAP model. The modification of the likelihood function for stock-recruitment represents an important structural change in the assessment model. Initial attempts to modify the model configuration to reduce the retrospective pattern were not successful. This suggested that more extensive review would be necessary for model identification. Such changes are typically beyond the bounds of operational assessments (updates), and the proposed modifications would likely need additional independent peer review. Collectively, these issues may result in a determination that an operational assessment cannot be justified, and a benchmark assessment for herring would therefore need to be scheduled. The current assessment schedule for NEFSC will not allow for a benchmark assessment in 2015, and it is unclear at this time when the benchmark would be scheduled. In lieu of an accepted stock assessment, catch advice would need to be provided for the interim years until the assessment issues can be resolved. The process through which catch advice will be developed remains unclear at this time. Dr. Deroba will brief the Council's Scientific and Statistical Committee regarding this issue at its January 13, 2015 meeting.

The EBFM and Herring PDTs discussed possible challenges that may be encountered when trying to develop ABC CR alternatives and analyses in the absence of an accepted stock assessment. Several PDT members agreed that ABC CRs could likely be evaluated without assessment estimates; for example, a population simulation could be developed to predict what may happen in situations when the assessment is wrong. Some PDT members, however, expressed concern about developing an ABC CR in the absence of an accepted assessment. Dr. Cieri expressed concern about the ability of the PDT to relate the ABC CR to the ecosystem without an assessment model. He highlighted the difference between a precautionary ABC CR and an ecosystem-based ABC CR and noted that the Council can be precautionary and choose to leave more herring in the water at any time. Mr. Applegate stated that while the PDT may not be able to provide numeric catch advice, it should be able to develop and evaluate a control rule structure in the absence of an operational assessment.

The joint EBFM PDT/Herring PDT meeting adjourned approximately 12:30 p.m.. Following a break for lunch, the Herring PDT reconvened for the afternoon session.

Overview of Council Risk Policy

Ms. Steele briefed the Herring PDT regarding the Council's recently-adopted Risk Policy and the RPWG's ongoing work to develop recommendations about how to apply the Risk Policy in the Herring FMP. She provided an overview of the matrix developed by the RPWG to identify baseline conditions in the Atlantic Herring FMP and provide the information needed for developing risk-based catch advice. Dr. Hall-Arber suggested that social factors be more explicitly addressed in the matrix, and Ms. Steele concurred. The Herring PDT agreed to work on refinements to the matrix and follow-up with the RPWG work at a future meeting.

2016-2018 Herring Fishery Specifications and RSA Priorities

The Herring PDT briefly reviewed the Action Plan for the herring fishery specifications (the number of years for the specifications may change depending on catch advice provided in lieu of an operational stock assessment). The discussion focused primarily on developing recommendations regarding cooperative research priorities for any research set-aside (RSA) allocations that may be made in the upcoming fishery specifications. **The PDT reviewed the 2014-2015 RSA priorities identified by the Council and agreed to support these priorities for any RSA that may be allocated during the upcoming fishery specifications process.** This includes two groups of research priorities:

Top-tier Research Priorities

1. River Herring Bycatch Avoidance – Develop and/or demonstrate methods that will enable river herring bycatch avoidance in the Atlantic herring fishery.
2. Portside Sampling – Develop and/or demonstrate a portside sampling program that will comprehensively characterize catch landed by Atlantic herring vessels

Other Research Priorities

1. Explore Net Sensor Technology Through “Study Fleet” – Investigate applications of passive monitoring systems for midwater trawl, small-mesh bottom trawl, and purse seine vessels in an attempt to identify conditions leading to higher rates of bycatch, improve the quality and timeliness of reporting, and, potentially help measure the extent of slippage.
2. Explore Video Monitoring Through a Pilot Program – Investigate the feasibility of electronic video monitoring in the Atlantic herring fishery as a means to document vessel fishing and catch processing operations.

Given recent increased interest in electronic monitoring (EM), the Herring PDT noted that the research priorities identified above could be grouped together, versus having a “top tier” and “other” categories, i.e., all four of the research priorities are equally important. Other research priorities that were briefly discussed but not recommended by the PDT as the top priorities for the upcoming RSAs included:

- Research related to inshore/offshore spawning;
- Using RSA to fund on-going at-sea monitoring programs.

While these issues are certainly important, the Herring PDT felt that the current (2014-2015) list adequately represents the top priorities for cooperative research under the Herring FMP RSA program at this time.

Herring Observer Coverage Options in Omnibus Industry-Funded Monitoring (IFM) Amendment

Ms. Nordeen briefed the Herring PDT regarding the development of options to address observer coverage on Atlantic herring vessels in the NMFS-led omnibus Industry-Funded Monitoring (IFM) Amendment. During the review of the options, Ms. Steele suggested that for clarity, the option labelled “up to 100%” be re-named to indicate that the target coverage under the option would, in fact, be 100%, but the allowance of waivers and limited funding may result in a coverage level less than 100%. This is somewhat different than an option that would specify a target that is actually up to 100%.

The Herring PDT reviewed the analyses provided by the NEFSC to support an option to target observer coverage such that a 30% coefficient of variation (CV) be achieved for river herring and shad catch estimates. The analysis to support this option should allow the Herring Committee to refine the details at the upcoming meeting. **To be consistent with the standardized bycatch reporting methodology (SBRM), the Herring PDT agreed that the RH/S CV option could be based on the most recent year of fishery information in order to determine coverage targets for the upcoming year.**

Ms. Steele expressed concern that the CV-based option does not fully reflect the Herring Committee’s intent, i.e, to establish coverage targets for the Category A and B herring vessels. The PDT discussed the concerns expressed by the NEFSC about allocating coverage by FMP or permit category versus SBRM fleet (New England midwater trawl, for example). GARFO staff agreed to arrange a conference call for the IFM PDT/FMAT to address this issue further prior to the January 16, 2015 Herring Committee meeting.

The Herring PDT adjourned at approximately 4:45 p.m..