New England Fishery Management Council
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DRAFT MEETING SUMMARY

Ecosystem Based Fishery Management (EBFM) Committee

Boston Marriott Quincy, 1000 Marriott Drive, Quincy, MA 02169
January 23-24, 2019

The EBFM Committee met on January 23-24, 2019 in Quincy, MA to receive a progress report from the Plan Development Team (PDT) on progress toward completing a draft example Fishery Ecosystem Plan (eFEP) for Georges Bank. The Committee also reviewed a draft project plan and timeline for ecosystem-based fishery management in New England through Management Strategy Evaluation (MSE) and develop recommendations on a process furthering the development of EBFM management policies. These recommendations will be made to the full Council during the following week. Leading up to the Committee meeting, the government shutdown prevented the PDT from meeting and thus the PDT report was shortened and some eFEP documents were thus unavailable.

MEETING ATTENDANCE: John Pappalardo (Chairman), Dr. Matthew McKenzie (Vice-chair), Dr. Michael Armstrong (substituting for Dr. David Pierce), Mr. Richard Bellavance, Mr. Eric Reid (Jan 23 only), Mr Peter Aarrestad; and Andrew Applegate (NEFMC staff, PDT chair). In addition, four members of the public attended, including George LaPointe and Drew Minkiewicz (Fishery Survival Fund), Katie Almeida (Town Dock), Andrea Bogomolni (Woods Hole Oceanographic Institute).

Presentations and background documents are available on the Council's EBFM web page (https://www.nefmc.org/calendar/jan-23-24-2019-ebfm-committee-meeting).

KEY OUTCOMES:

- The committee reviewed the progress that had been made and the eFEP framework that was presented at the previous committee meeting, to recommend Council approval of the problem statement, the vision statement, the draft goals and objectives, and the overall framework of components for the eFEP. Although the current eFEP document has a lot of holes and uncompleted parts, it seemed necessary and appropriate for the committee to get a glimpse of a first rough draft to see how it was beginning to come together.

- The committee made some changes to the problem statement, the vision statement, and the goals and objectives and is recommending Council approval of them for the purposes of use in the eFEP. All recognize that these sections would remain open for further work

and refinement through the MSE.

- The committee reviewed a matrix of example species complexes (for setting catch limits) and fishery functional groups (for allocating catches by fishery) for Georges Bank, including more than 70 species managed by the NEFMC and other authorities and unmanaged species.

- The committee discussed problems related to scheduling and holding PDT and Committee meetings during 2018 and recommended scheduling a series of regular committee meetings through the remainder of 2019, so that committee members and staff keep the dates available to ensure maximum committee participation.

- After thorough discussion, the committee agreed to begin an MSE planning process including the appointment of an MSE steering committee to develop a process and plan workshops, working with the NEFSC as a partner in this effort. The committee did not however adopt the strawman goal for the MSE itself, which was floated by staff at the December Council meeting.

- While recommending that the Council proceed with MSE planning and the formation of a steering committee, the committee felt strongly that the Council should not begin the MSE workshops (educational, introductory, or otherwise) until the eFEP is nearly complete and ready for use by workshop participants. Due to the effects of two government shutdowns and focus on the worked example during 2017 and 2018, the earliest the eFEP might be nearing completion would be September. Thus MSE workshops would not happen until the last quarter of 2019.

- The committee also felt strongly that MSE workshops should involve an appointed slate of participants who are more than likely to stay engaged throughout the process rather than an open hearing format, which was the format for the Herring Amendment 8 MSE workshops.

- The update on the Northeast Region Implementation Plan and Documents 2a, 2b, and 2c were scratched from the agenda, due to the government shutdown.

Motions:

1. Mr. Reid/Dr. McKenzie The committee recommends completing the eFEP and begin planning for an MSE process that will begin when the eFEP is complete. The committee also recommends approval of the problem statement, visions statement, goals and objectives as part of the eFEP. The motion carried 4-0.

2. Dr. McKenzie/Dr. Armstrong: To recommend that the Council begin MSE planning with the establishment of a steering committee to develop strategies for soliciting input and evaluation of management strategies consistent with ecosystem management. The motion carried 4-0.

Introduction

Mr. Pappalardo opened the meeting by reviewing the agenda, explaining that the original intent of the meeting was modified to accommodate the abbreviated PDT report because it had not met recently due to the government shutdown and because the Council had received an informal proposed project plan for conducting an MSE for ecosystem management in New England from Dr. Hare, the director of the Northeast Fishery Science Center. He indicated that the committee would spend some time talking about the process and develop recommendations for next week's Council meeting on how to proceed from here.

AGENDA ITEM 1–EBFM PDT REPORT

Presentation

For the Committee meeting, Mr. Applegate prepared and presented a summary and review of previous Committee discussion and decisions, beginning with a review of approaches to ecosystem management by Councils and other countries in 2014, followed in 2015 with a decision about a process to follow for developing EBFM in New England. Four process options were identified in 2015 and the Council chose to develop an example Fishery Ecosystem Plan (eFEP) for Georges Bank, largely because of the strong supporting science. This eFEP was intended to identify the possibilities and focus discussion.

Mr. Applegate said that quite a bit of work had been presented to the committee during since work began on the eFEP in 2015. Many of these documents were available on the Council's EBFM page and links were provided in Document 1b. This work included two documents about providing catch advice from January and September 2017 and example operating models for the Georges Bank ecosystem. Two additional draft documents on forage fish management and on ecosystem risk assessment. Both documents required input from the Committee and Council before they could be completed, although the committee had decided to use these documents as tools for fishery ecosystem plan development.

The PDT began developing draft discussion documents about various issues and components of an eFEP, but was later directed to focus on a worked example for ecosystem-based harvest control rules, to undergo an independent peer review. Existing operating model results and a worked example were presented to the committee at several opportunities in 2017, culminating in an independent peer review in early May 2018 (a meeting that was postponed from January 2018 due to an earlier government shutdown). A preliminary report of the peer review was given to the Council by the panel chair, Dr. Lisa Kerr, in June 2018 followed by a more thorough final report in September 2018.

Mr. Applegate reported that following the peer review, he had hoped to refocus the PDT work on components of the developing eFEP but that it was difficult to schedule PDT meetings due to conflicts. He had also attempted to schedule an EBFM Committee meeting on November 13, 2018, but the meeting had to be postponed to January 2019 due to conflicts with other committee meetings.

Discussion

The committee accepted the report and decided that scheduling regular committee meetings for the remainder of 2019 could help keep progress moving.

The committee discussed the potential use of the eFEP and whether more open public debate was needed at this point, or later during an MSE process. Mr. Pappalardo felt that the time for an open public debate would be forthcoming, once the example FEP framework were more fully developed. Mr. Minkiewicz was troubled with the lack of public debate at this point. He felt that ecosystem management was not on most people's radar and wondered why this was a priority.

Mr. Reid recognized that this effort is a daunting task and that many people don't yet understand what we are trying to do. He thought that an eFEP will be forward thinking, but not binding, providing direction to inform future decision making. He was comfortable with the timeline that we are following and the one presented to complete the eFEP, before using it to translate the EBFM language into something that a broad audience would understand. He pointed out that at most Council meetings, EBFM was given a short period of time and is often last on the meeting agenda.

Dr. McKenzie stated that he understood the desire for open public debate and was confident that it would be the core of the next phase. The eFEP document, he pointed out, would be ready for public discussion and would be modified as it went forward during that debate. Dr. Armstrong said that the slow progress so far causes us to lose sight of where we are.

AGENDA ITEM 2 – EFEP FRAMEWORK AND ROUGH DRAFT

Presentation

Mr. Applegate presented a rough draft of an eFEP for Georges Bank. He said that although several sections of the previously presented eFEP framework had been filled in from work on the PDT's discussion documents, there were significant gaps that had not yet been written and the document had not yet undergone extensive editing. Nonetheless, the document gave the committee a first view of how the pieces fit together in a cogent document. Some sections, such as harvest control rules and catch management, or conservation by spatial management, have not yet been written because we have not yet received related PDT documents. In particular, the PDT had not yet hashed out options and issues related to protection of vulnerable stocks and rebuilding of overfished or depleted stocks which are part of a stock complex having a common catch cap.

Mr. Applegate indicated that the Committee suggestions on the problem and vision statements had been worked into the draft. He pointed out that the Committee had also reviewed and modified the goals and objectives during two previous Committee meetings, but these sections have not been reviewed or approved by the Council for the eFEP.

Mr. Applegate also reviewed the PDT's task list with the committee. The task list focuses on completing discussion documents related to various aspects of the eFEP, which is also outlined

in the eFEP's Table of Contents. Mr. Applegate said that the task list was last updated in September, when the PDT was supposed to meet in the fall and the committee was supposed to meet on November 13. These postponements plus the government shutdown will affect the anticipated completion date for the eFEP in June 2019. He thought that the earliest that the PDT could complete this work would be for the September 2019 Council meeting.

Mr. Applegate asked the committee whether they had any guidance for the ordering of the task list or whether the committee thought an important component was omitted.

Motion:

1. Mr. Reid/Dr. McKenzie The committee recommends completing the eFEP and begin planning for an MSE process that will begin when the eFEP is complete. The committee also recommends approval of the problem statement, visions statement, goals and objectives as part of the eFEP. The motion carried 4-0.

Discussion

Dr. McKenzie asked about the potential approaches to stock complex catch management and overfished stocks. He felt that the approach might be something like the B DAS system or point system that were intended to focus effort on healthy stocks and discourage targeting of overfished stocks. He said that a critique of those actual and proposed systems would be interesting. Dr. McKenzie added that many scientists thought that the focus of management policy of producing maximum sustainable yield (MSY) was misguided, an inappropriate management target.

Mr. Applegate responded that much of the problem here may be related to its application, calculated based on single stock estimated productivity over a 20 or 30-year period which may not apply to current or future conditions and often do not take into account ecosystem influences on productivity.

Mr. Reid felt that another reference point using optimum yield to consider the best economic mix of species for a fishery would be a better choice.

Dr. Armstrong emphasized that MSY is a scientific fallacy and that reference points for an ecosystem plan will need to be very different than they are now. He pointed out that the proposed floors for species or single stocks could fall back into the problems we have with single species management.

Mr. Bellavance thought that the role of monitoring and data collection in ecosystem management should be addressed. Dr. McKenzie agreed that they should be an integral component of an ecosystem plan for improving assessments and adaptive management. He thought it was important to incorporate fishermen knowledge into the system, in a way that everyone trusts. Mr. Pappalardo added that a higher degree of real time data would be needed. Mr. Reid felt that better information about fish behavior is needed.

On spatial management issues, Dr. Armstrong felt that recent work on cod illustrated that fish can have complex spawning systems that can be negatively affected by fishing, sometimes leading to serial depletion of sub-stocks. He felt that this issue should be identified and discussed in the PDT task list. Dr. Armstrong also thought that the PDT should consider a separate management unit inshore to manage coastal species found around the Cape and Islands. Mr. Reid thought that this would bring up the issue of who has authority to manage catches.

Dr. McKenzie suggested that the effort distribution maps were helpful for describing the scope of the action and affected fisheries, but the effort distribution was itself affected by past and current regulations. Some of the maps in the document characterized effort by vessel ton class, which Mr. Reid felt was not a good metric. Some large open vessels had small tonnage, yet had the size to fish offshore in heavier weather conditions.

Mr. Reid suggested that under an FEP, it would be the NEFMC that would have clear authority to manage biomass in an ecosystem. Dr. McKenzie replied that this issue brings up membership on management boards and committees.

Mr. Minkiewicz said that the link between habitat and juvenile fish productivity was not demonstrated. He explained that previous analysis showed no direct link between habitat quality and fish productivity.

Mr. Pappalardo raised an issue about unmanaged forage fish, such as sand eels, and pointed out that Europe has a significant fishery targeting sand eels. Mr. Applegate pointed out that in New England's regulated mesh areas, it would be difficult if not impossible to develop a fishery on small forage fish without substantial changes in the large mesh regulations (which were established in the mid-1990s and exempted fishery regulations which specify when, where, and how vessels may use small mesh gears. The regulations also specify how much of each target or non-target species may be retained. All other species may not be retained. Mr. Applegate said that this issue is discussed in the draft forage fish policy paper.

Mr. Reid asked about the invasive and unmanaged species task in the PDT task list. Mr. Applegate replied that this issue included the bryozoan mats, green crabs in ME, and imported bait as well as other related issues.

The committee then focused on the problem and vision statements, suggesting edits to the text that were made overnight before the second day of the meeting. The committee thought that addressing the unknowing and unknowable factors in an ecosystem was confusing and awkward, suggesting striking out the text for the Council approval because the contributing committee member for that text was not present. The committee agreed that the eFEP was intended to consider aspects and approaches that might be outside the scope of the current law, but that in the end a final FEP would of course operate within the US fisheries law which might be modified in the future to allow for better ecosystem management. Mr. Aarrestad agreed that the Council through the eFEP needs to be creative and not be constrained by the current law. He said that laws change and the plan could demonstrate the benefit of a different approach, leading to changes in the current law.

On goals and objectives, the committee discussed what it meant to optimize employment and promote stability. The latter would be difficult to achieve in a dynamic and trending system. Mr. Pappalardo said that the goals and objectives imply that there would be tradeoffs needed for an 'optimized' result. Mr. Applegate added that the original goals had used 'maximize' rather than 'optimize' and they were changed for that very reason. Mr. Pappalardo suggested a change in the goals to maintain a balanced ecosystem.

Mr. Bellavance asked whether the objectives were meant to describe a desired outcome or a tactic. Dr. Armstrong said that he agreed with the way the objectives were written, noting that the action to achieve the objectives would vary and that the objectives were written to describe intent rather than a tactic.

Motion 1 was made following discussion at the end of the first day, but the committee tabled it until the end of the discussion of the MSE project plan and timeline on the second day of the committee meeting.

It included the following modified language for the problem statement, vision statement and goals and objectives:

1.1 Problem statement

Currently, the Councils manage mortality on individual stocks, with minimal regard to how they are caught together or have a primary predator/prey relationship. Stocks are managed to achieve an estimate of MSY for a stock, often with little regard of whether this is achievable for all stocks in a plan (much less between plans), what the expected benefits of achieving MSY are, or how the stock interacts with other related components of the ecosystem.

The sum of, and even on an individual basis, these MSY estimates may be considerably higher than that produced by the ecosystem and are thus unattainable. This eFEP to explore ways to seek to resolve these limitations, as well as address growing concerns about current single stock management approaches. It is expected that this document will provide a foundation for future regulatory mechanisms.

FMPs do not often address stakeholders that indirectly rely on the managed resources, fishery valued on the harvest side, but rarely considers benefits to other species and fisheries and businesses that rely on them.

To fish using a specific gear in an area, fishermen currently need to accrue a suite of permits or discard species for which they have no permits to land them. Many of these permits require qualification through a limited access program and are difficult or costly to obtain. Permitting, enforcement, and discarding can thus be economically expensive and inefficient. Also, low catch limits for depleted stocks can create a choke situation where either healthier stocks cannot be targeted without unacceptably high mortality on the choke species, yield is foregone for the healthy stocks, or the current management system imposes large economic costs on fishermen to lease or buy allocations and continue fishing. From the perspective of a fisherman, regulations

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are not streamlined and can be difficult to understand, much less stay in compliance with an array of regulations.

Furthermore, with rare exception, the stocks are managed individually by often separate FMPs with catch limits with little regard to anything but commercial and recreational fishing interests. With the exception of recent efforts to improve the Atlantic herring harvest control rule, providing adequate forage for fish, seabirds, and whales is generally not considered, except in the belief that independently derived MSY estimates for individual stocks will satisfy this ecological demand.

There are gaps in data and monitoring across the various FMPs that apply to Georges Bank species. Although the recently develop Ecosystem Monitoring Reports partially addresses the problem, there is not a routine ecosystem monitoring component that tracks the overall health of the ecosystem and the role that management of that species plays in it.

1.2 Vison statement

The NEFMC's vision is ecosystem-based fishery management that harmonizes ~~what is known, unknown, and unknowable about~~ fishery resources and ecosystems with realities of fishing operations and the law. Catches on Georges Bank would be managed by fishery and with consideration of a broader range of ecosystem objectives and considerations, "including trophic interactions between fished and un-fished species, and impacts on non-fishery elements including habitats and regional communities

As a result, the NEFMC expects that an FEP will:

- account for interactions between fishery resource species,
- promote sustainable, healthy ecosystems, including exploited and non- exploited species,
- achieve greater stability in fishery management and fishing opportunities,
- achieve more flexibility in fishing operations,
- strive to reduce the complexity of fishery management and regulations,
- strive to reduce discarding

5.0 Goals and objectives

5.1 Goals – measurable or desirable outcomes

5.1.1 Overarching Goal

> *To protect the ecological integrity of US marine resources as a sustainable source of wealth and well-being for current and future generations (Goal A)*

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5.1.2 Strategic Goals (Derived from Magnuson definition of OY as in Risk Policy Document):

1. Optimize Food Provision through targeted fishing and fishing for species for bait
2. Optimize Employment
3. Optimize Recreational Opportunity
4. Maintain a healthy and balanced ecosystem
5. Optimize Profitability
6. Promote stability in both the biological and social systems

5.1.3 Objectives - General description of how the FEP is designed to achieve goals

5.1.3.1 Strategic Objectives

1. Manage fisheries and their catches together, rather than as individual stocks

2. Account for total benefits and balance tradeoffs, including economic returns, value to fishing communities, and the needs of a healthy ecosystem.

3. Reduce permitting and compliance costs.

4. Minimize discarding and economic waste (including the value of discarded fish, unnecessary steaming and gear costs, enforcement costs, sub-par catch allocations that don't meet overall objectives)

5. Promote and improve the sustainability of fishing communities as well as a diversity of fisheries and vessel classes.

5.1.3.2 Operational Objectives (SMART: Specific, Measurable, Achievable, Relevant, Time-bound)

- Establish overfishing levels based on MSY for the ecosystem, allocated to stock complexes of related species.
- Through Management Strategy Evaluation, develop valuation methods to analyze and balance tradeoffs in setting harvest control rules.

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- Develop harvest control rules and associated assessment capabilities that account for trophic relationships.
- Develop flexible harvest control rules that account for changes in the environment and ecosystem.
- Protect stocks from depletion by promoting fishing for resilient and healthy species while discouraging targeting of vulnerable and depleted stocks.
- Develop a permitting system that is consistent with modes of fishing with a gear type in a specified area and stock complex catch limits with fishery functional group allocations to identified fisheries, instead of permits to fish for and retain specific species of fish.
- Allocate catch limits associated with stock complexes to fishery functional groups associated with identified fisheries

The motion carried 4-0.

AGENDA ITEM 3 – PLAN AND TIMELINE FOR MSE PROCESS

Presentation

Referring to the "Thoughts on EBFM in New England" document, Mr. Applegate indicated that the Executive Director had informally received the document from Dr. Hare for feedback, but the government shutdown occurred before staff was able to respond. Staff identified several issues such as primary responsibilities, and use of the eFEP were not included in the plan. Some of the tasks could be developed in parallel which would have the potential for shortening the timeline for MSE (essentially steps 1-5) while step 6 is essentially the normal process the Council would use to develop a final FEP with analyzed alternatives (Environmental Impact Statement). Staff developed a Gantt chart, or timeline which incorporates previous and ongoing work on the eFEP, shows more detail, and identifies who is primarily responsible for each step.

Following the staff timeline, the MSE would begin with the informational and educational workshops, taking approximately two years, which might begin as the eFEP was being finalized, but the eFEP framework could be used by an MSE steering committee to develop the MSE process, addressing portions of an FEP discussion.

Motion:

2. Dr. McKenzie/Dr. Armstrong: To recommend that the Council begin MSE planning with the establishment of a steering committee to develop strategies for soliciting input and evaluation of management strategies consistent with ecosystem management.

Discussion

The committee generally agreed with the staff's thoughts on the proposed project plan and felt that the staff timeline was very helpful. The committee discussed a number of issues related to the Herring Amendment 8 MSE process, including the open participation format and having only two MSE workshops.

Mr. Applegate suggested that for the informational and educational workshops, it could be helpful to bring in expertise from the MREP program that had developed a similar EBFM module and adapt the module to meet our purpose and needs.

Although the Herring process was inclusive and a broad range of stakeholders provided input, the committee thought it would be more useful to have a set of identified participants who would be engaged in the entire process and be able to talk with other stakeholders that associate with them. Mr. Pappalardo forecast that there would be three types of stakeholders, people that had current fishery access and are afraid to loose it, people that don't have current fishery access and saw EBFM as an opportunity, and people that had pelagic fishery and non-fishery interests.

Mr. Minkiewicz asked where the MSE participants would come from because currently there appears to be a lack of interest. He asked where this initiative was coming from and why, because most of the problems were related to groundfish. He said that other than some bycatch issues being addressed, single species management was working particularly for scallops.

Mr. Applegate replied that the initiative had come from the NMFS agency, from Congress encouraging ecosystem management, from the Council's Scientific and Statistical Committee who authored a series of white papers in 2010 and 2011, and from the Council itself who ranked EBFM as a number 1 or 2 priority in 2017 and as a relatively high priority in 2018.

During the discussion, the committee felt it was very important to complete the eFEP before beginning the educational and informational workshops, but begin the planning process with an MSE steering committee using the eFEP framework and a retrospective analysis of the Herring MSE as guidance. The committee agreed that a public education phase before beginning a formal MSE process was desirable.

Mr. LaPointe said that the current eFEP was a preliminary draft, but was incomplete. He thought that going too fast could actually slow the process down and that the PDT needed the time to complete the document before starting the MSE.

The Committee thought that a steering committee could work on developing and recommending an MSE process to be used, including a strategy to select input and participants and a way to evaluate management strategies build on the concepts and issues discussed in the eFEP. It could take an approach of a series of workshops distributed throughout the region or a single but lengthy workshop format.

Motion 2 carried 4-0.

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The EBFM Committee meeting began at 10:00 am and adjourned at approximately 5:30 p.m. on January 23rd. The meeting began at 9:00 am and adjourned at approximately 11:30 am on January 24th.

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