



New England Fishery Management Council

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MEETING SUMMARY

Ecosystem Based Fishery Management (EBFM) Committee

Fairfield Inn, New Bedford, MA

November 10, 2015

The EBFM Committee met on November 10, 2015 in New Bedford, MA to develop comments on a Draft NOAA Fisheries Ecosystem Based Fishery Management Policy document. The Committee also received and provided feedback and guidance on an initial (prototype) example Fishery Ecosystem Plan developed by the Plan Development Team (PDT).

MEETING ATTENDANCE: John Pappalardo (Chairman), Dr. Matthew McKenzie (Vice Chair), Mary Beth Tooley, Dr. Michael Sissenwine, Terry Alexander, Frank Blount, Eric Reid, Warren Elliott and Jeff Kaelin (MAFMC); Andrew Applegate (NEFMC staff); Tobey Curtis (NMFS GARFO staff); and Mike Fogarty (NEFSC). In addition, nine members of the public attended.

Presentations and background documents are available on the Council's EBFM web page (<http://www.nefmc.org/ecosystems/index.html>).

No motions were made during the meeting and there are no formal recommendations for Council approvals at this time.

KEY OUTCOMES:

- The EBFM Committee discussed the Draft NOAA Fisheries Ecosystem Based Fishery Management Policy document. The committee decided to develop comments based on previous Council comments on National Standard 1 guidelines from June 2015. Staff was instructed to work with the committee chair to develop a draft letter for Council review at the December 2015 meeting.
- The PDT chair gave a report on the development of an example Fishery Ecosystem Plan (eFEP) framework, with strawman goals and objectives. The committee was asked to provide feedback and guidance at this early stage, so that the PDT could continue work to develop a draft eFEP by June 2016. In general, the committee thought it was a good comprehensive start to develop a place-based ecosystem management plan. The committee provided some general comments on the strawman goals and objectives, as well as the structure of the eFEP framework, but did not comment on the management

specifics (section 4 in the eFEP framework document). Some of the main comments during the meeting were:

- The committee liked the main goal and the six strategic goals, but were not so keen on the goal to “Optimize Intrinsic Value”.
 - The committee recognized not only would it be impossible to “maximize” the values listed in the goals, but that it would also be very difficult to “optimize” them. Some additional discussion will help explain what we mean by “optimize”. The committee will be looking for examples and a demonstration through some sort of MSE analysis.
 - That the goal to “optimize food production” should also include catching fish for bait (and probably protein for feed) to catch or produce fish for food.
 - The committee generally liked the tiered approach in the eFEP framework, with one or more management units (MUs) within a much larger EPU. They will be looking for more details about what these MUs would look like and how they would function. One key element in this will be how vessels would be qualified to fish in specific MUs and how the EPU catch limits would be allocated between the MUs and allocated to fishermen (vessels).
 - More details (or examples) are needed about how catch limits would be estimated and specifications would be set, i.e. by guild, stock, etc.
 - More details are needed about how MSY would be defined for the EPU and how it would relate to yield derived from individual species or stocks.
 - There were some questions regarding what would happen if a stock was deemed overfished. How would that situation be managed if catch allocations were made at the guild level? Would there be a rebuilding schedule? If there is no target biomass for a stock, but only an overfished threshold, what would be the rebuilding goal?
 - Some discussion of how we would transition from the present form of stock-based management to place-based ecosystem management is needed.
- The committee will review the 2010-2014 management priorities and develop a new list at its next meeting.
 - The committee thought that an Advisory Panel would be useful for reviewing and discussing a draft FEP during the latter half of 2016, but the committee was undecided about the AP composition or whether to form APs according to putative Ecosystem Production Units (EPUs) or whether one AP would be better. The committee will take up the issue again at its next meeting.

Mr. Pappalardo opened the meeting and directed the committee’s attention to the Draft NOAA Fisheries Ecosystem Based Fishery Management Policy document as well as the June 2015 Council comments on National Standard 1 guidelines, which he said that he had requested because it contained relevant ecosystem policy comments. Then for the second agenda item the PDT chair, Mr. Applegate, will give a summary of the progress that the EBFM PDT had made to get committee feedback and guidance.

AGENDA ITEM 1– DRAFT NOAA FISHERIES ECOSYSTEM BASED FISHERY MANAGEMENT POLICY

Discussion

The committee discussion focused mainly on the uncertainty about how MSY would relate to ecosystem limits and targets. The committee also discussed whether resources devoted to EBFM research and scientific advice would be diverted from or constrained by resources earmarked from other important management priorities.

Mr. Kaelin said that MSY reference points are currently needed for all species and stocks, but the National Standard 1 guideline comments raised intriguing possibilities. Mr. Alexander asked whether people thought that the (uncertainty) buffers would be lower or different than they are now. Everybody believed that the buffers would be different, but no one knew whether they would necessarily be lower, because more information and data would be taken into consideration (possibly reducing uncertainty).

Dr. Sissenwine thought that the question about MSY illustrates the problem, i.e. that we are dealing with a new animal, so how uncertainty is translated into a buffer is not yet known. It is complex because the reference levels will move around, so it isn't clear how the risk buffers will be affected. Incorporating ecosystem effects may have favorable impacts for one species and not the other, he thought. Dr. Sissenwine said that risk/uncertainty buffers will be dealt with in a new way, but we don't yet know what that will be. Mr. Pappalardo added that the NEFMC effort to develop eFEP will illustrate how the buffers are identified

Mr. McKenzie (rhetorically) asked how well is MSY performing as a management target. He asked if we believe that the application of MSY is still technically appropriate. Under current MSY management the intent is to cause rebuilding of stock biomass and prevent backsliding. He thought that yellowtail flounder management is a good example, where it has been managed using MSY reference points, but the stock has continued to decline. Mrs. Tooley said that this was an example where MSY is a double edged sword.

Mr. Reid asked if we are able to develop an EBFM plan under current Magnuson rules. Mr. McKenzie answered that the Councils would still be bound by Magnuson, but we should be thinking about new ways to determine how much to allocate and how to get sustainability and profitability through a different mechanism.

Mrs. Tooley thought that MSY was being overemphasized and that the overarching goal of the Magnuson Act was optimum yield, that catch advice is based on optimum yield, not MSY. Mr. Pappalardo said that a major problem is that our management reference points are static quantities, but the ecosystem is continually changing.

Dr. Sissenwine, responding to the concept that the Magnuson Act restricts the development of EBFM, pointed out that early work by Dr. Rothschild and others before the Magnuson Act took effect considered whether single-species MSY was an appropriate management target. At that time, they did not consider that the Act constrained anything, but we have 40 years of legal precedent, culture, and tradition. The barrier in the law is actually not as great as we make it out to be, he opined.

Mr. Kaelin was intrigued with Dr. Link's presentation in slides 6 and 7 (http://s3.amazonaws.com/nefmc.org/1_EBFM-Policy-Presentation-NEFMC-Oct-1-2015-final_1.pdf). It signaled that agency could take a different approach – value based method for setting quotas – page 2 acknowledged that. He gave an example where a different choice would be appropriate is in the windowpane flounder quota decision. In the draft policy, he liked the statement on page 3 that efforts to include climate factors into single species assessments. He said that we should make system we have better and better informed, with new science and recognized regime shifts. He was also intrigued by managing mutual funds comment, which could build on single species management approach.

Dr. Sissenwine added that we don't know the implications yet, because we have not yet developed the new fishery ecosystem framework. He stated that economic importance and vulnerability varies over species. Regime may achieve MSY based on energetics, but other measures that recognize other values are also important. We don't know if that will be acceptable to the agency. Conditional MSY exists for every species, conditioned on no changes in other factors, like energetics and climate change. But ignoring those factors, MSY is thought of as an averaged concept, and thought to have minimal interaction with other stocks. Conditional MSY becomes a moving target.

Answering a questions from Mr. McKenzie, Dr. Sissenwine pointed out that the concept of floors and ceilings has been discussed, some sort of framework for preventing that from depletion from becoming an issue. Dr. Sissenwine added that we need to think critically about it becoming a framework for a vulnerability analysis. For example, turtles are more vulnerable than the target swordfish species. Different mortality rates are acceptable for different species. He said that we need to address situations where true bycatch makes a bycatch species more vulnerable than the well-managed target stock.

Mr. Reid thought that the policy should focus on developing groups of managed stocks with their own rules, managing by functional group.

Mr. Kaelin questioned the terminology in the policy draft that needed more thought. For example how to describe and measure what is a resilient ecosystem – what is it? There are also important sub-ecosystems and stocks within smaller regions. What is the outcome of the pyramid, he asked rhetorically. He thought that the policy draft gave no indication of these values or how to assess them.

Mr. Pappalardo said that the draft policy did not identify what are the resource constraints to support FEP development – which had the same type of reaction that occurred when the Council developed sector management. It also did not address the jurisdictional issues. How to incorporate and accommodate regime shifts with current governance? Is current rulemaking process appropriate and responsive? The current process is inefficient and automatic adjustments within agreed upon bounds should be incorporated into the EBFM strategy as a policy. Mrs. Tooley added that other regions are more nimble because they entrust the agency to make decisions and adjustments. This type of approach should be encouraged in supporting the development of EBFM policy

Dr. Sissenwine pointed out that there used to be an overall catch cap pre-FCMA. This approach was explored by NAFO – energy based caps. Dr. Sissenwine thought that from a broad perspective, the strategy pyramid in the draft policy doesn't have stated objective at the top to optimize benefits across multiple objectives. He thought that the Council comments should build on National Standard 1 guideline comments focusing on two key issues – MSY on an energy level and changing reference points in a changing climate, which is recognized in the policy document but gives no guidance. A third area to comment is the issue of jurisdictions in a changing climate. He thought that the draft policy document was a good start – but ultimate objectives should be stated. It offers no useful guidance on the above three key issues. These issues should be addressed collectively in a participatory manner. Councils need to be involved in shaping national guidance. Mr. Pappalardo suggested that this issue should be considered by the NRCC.

Mrs. Tooley thought that the policy was lacking a direct link to fisheries and a low priority was being given to managing healthy fisheries. She thought that the policy should highlight early in the document the importance of the National Standards, ultimately maximizing the net benefits to the nation and recognizing the societal benefits of healthy fisheries. Mr. Kaelin added that other problems should also be recognized, for example resource constraints need to be recognized and dealt with. It should address stocks that have shifted out of our random stratified surveys. He thought that the policy should creating a system with more buy in from the agency and the public, but the draft policy document is not specific enough to develop EBFM roadmap.

Mr. Curtis explained that the agency was being sensitive about being overly restrictive and that the policy needed to provide more flexibility. He said that the policy was meant to address backbone issues related to the Magnuson Act. The point of view is that there are no major legal impediments and the policy would let the Councils deal with differing regional circumstances.

Dr. Armstrong said that one omitted issue was that we are trying to build EBFM from a damaged ecosystem. There are lots of 'thorny skates' out there and other stressed species. Added to that, there are new circumstances driving productivity, he pointed out. Mr. Kaelin added that a long time series of information used in assessments and other analyses has limited value to inform managers about current circumstances. He thought that different thinking and approaches for setting reference points is needed. Mr. Pappalardo added that lots of information is not being pulled into the decisionmaking. More comprehensive information would give a more holistic view of circumstances and future potential.

AGENDA ITEM 2– EXAMPLE FISHERY ECOSYSTEM PLAN DEVELOPMENT

Presentation

Summarized in Document 3A, Mr. Applegate gave a verbal description of how and in what context that the PDT developed an initial prototype for an example Fishery Ecosystem Plan. The documents included a structured framework of fishery plan components, with strawman goals and objectives. Document 3C contained a structured list of goals and objectives. The PDT developed an overarching goal and six strategic goals, recognizing that they would require tradeoffs to be made between them, but all of the goals were meant to specify measurable

outcomes. These were furthermore incorporated into the Council's Risk Policy Roadmap outline, a structure already familiar to Council members. Document 3E contained a framework of a tiered place-based management approach, which would set overall Ecosystem Production Unit catch limits by guild or aggregate group and minimum biomass thresholds to define when a stock is overfished, then provide for more localized Management Units within the EPU to develop and implement technical measures (including authorization to fish based on historical participation in fisheries within the management unit).

Discussion

Mr. Kaelin thought that the strategic goals is a really valuable component and the liked the 'SMART' operational objectives. He commented that optimum yield should be the primary focus of the goals, defining the balance between too much extractive value and not enough.

Mrs. Tooley said that it should be grounded in a science-based approach to define what is an optimum species mix and balance. Dr. Sissenwine said that the Baltic Sea multispecies strategy was an attempt at doing that, trying to define an optimal mix of cod and pelagic species (sprat and herring).

Dr. Fogarty explained that balanced harvesting has been addressed in the structure. A different way of thinking is that the biomass of functional groups are more stable and predictable than the individual parts. Responding to an earlier comment about stability, he said that the ecosystem models do not expect things to be static, not in an equilibrium, but that maintaining a balance in the productivity of different functional groups was important, i.e. basket systems based on ecological organization. The approach takes a spatial orientation, rather than a single species orientation.

Dr. Fogarty thought that the transition costs between approaches will be a key consideration, but in the long run the costs will be less because we won't be micromanaging on a species basis. He suggested that the assessments would be consolidated into geographic areas, handled in a comprehensive, consistent way. There could be substantial savings, compared to how we currently operate. He added that an integral point of multispecies approach is to bring in other spectrum of information to make decisions. He explained that decadal scale aggregate changes are detectable and can be used in predictions

Mrs. Tooley commented that managers never get an aggregate tally of total biomass observed on the survey, only details about individual species. Mr. Pappalardo commented that more information is needed beside only survey data, that fishery dependent data need to be brought into the decisionmaking. Mr. Alexander countered that it is difficult to interpret, use and apply fishery dependent data because fishing behavior has been radically affected by the management system. He said that the only true way to interpret those data was to allow fishermen to fish more freely without the distortion caused by management rules.

Mr. Reid said that the current fishing permits based on history fishing for specific species will not work. He liked idea in the draft eFEP that permits are spaced based. A side benefit would be

that the system would produce better data because more catch would be landed and not discarded.

Mr. Kaelin added that a study fleet to provide tow based info is important, but that the idea of full retention is attractive to some people. He also liked the management board approach, but a place that it could begin is around the research and ecosystem monitoring piece. He pointed out that we need to have new science to support EBFM collected by fishermen that are out more frequently, a collaborative working group.

After lunch, Mr. Alexander started out the discussion by commenting that the concept of optimizing in the strategic goals was ambiguous, because it would mean different things to different people. More examples and demonstration of potential outcomes would be needed. Mrs. Tooley thought that a description of practicability or how the tradeoffs would work in the real world would be helpful. She thought that intrinsic or existence value would be hard to measure and therefore would be difficult to optimize relative to the other strategic goals. Mr. Kaelin agreed that the eFEP would need to be as quantitative as possible to get the necessary buy-in. Mr. McKenzie suggested using the word 'enhance' or 'promote' rather than 'encourage' in strategic goal VI.

Mr. Alexander asked if and how the eFEP framework address an overfished or depleted species? In that situation, what is the rebuilding target and what happens, he asked. Mrs. Tooley commented that providing protection may be interpreted as being too constraining. Also a definition of 'ecological integrity' and a glossary of terms is needed.

Public comment

After the committee discussion, Mr. Pappalardo opened the meeting to public comment on the eFEP development. Annie Hawkins, Fisheries Survival Fund, commented that the overall mandate of Magnuson is to conserve the nation's fisheries. She thought that some things in the eFEP framework go beyond the scope of fisheries management. Jud Crawford thought that the committee discussion was good and that the list of strategic goals was a good starting point. He said that the outline creates a path to achievement of results that interact and one that cannot ignore some outcomes without considering others. He commented that strategic goal VI should recognize the conflict with an inherently unstable system. Megan Lapp commented that the Council needs to keep the plan realistic. She liked the flexible and adaptive elements because under the current system there is not room for fishermen to be adaptive due to permit restrictions.

AGENDA ITEM 3– ECOSYSTEM MANAGEMENT RESEARCH PRIORITIES

Presentation

Mr. Applegate explained that the Council had been requested by NMFS to update its five-year research priorities and explained the plan to involve staff, PDTs, and Council committees in the revision process, with the goal to formalize the new priorities by February. He pointed out where the EBFM-related priorities were listed in the 2010-2014 document and said that many of the items seemed to be specifically related to some management problems that were occurring at the time, including the one related to the effectiveness of closed areas which had been addressed

by the Council's Closed Area Technical Team. He said that he also circulated the list to and asked for comment from the EBFM PDT. It is an opportunity to identify research and data collection needs related to EBFM, especially related to the various ecosystem models and how they would inform the Council about catch limits. Mr. Applegate said that the committee did not need to develop recommendations at this meeting, but that the committee and PDT should develop ideas which can be discussed and formalized at a January 2016 committee meeting. After that, the list is assembled from the various committees and forwarded to the Executive Committee.

Discussion

Mr. Pappalardo asked how the list of priorities is used by NMFS and thought that the list should be coordinated with the Mid-Atlantic Council. Mr. Curtis responded that the priorities were used to evaluate research proposals, such as for Saltonstall-Kennedy Act grants and other programs. Dr. Sissenwine added that the list is not used to make strategic decisions at the center, but could be used to promote specific research projects.

Mr. Kaelin thought that one item should be examining the extent of forage-limited species, where insufficient forage was having an effect on productivity of predators. Dr. Armstrong thought that the ecosystem models should dictate the data needs to identify in the research priorities. Dr. Fogarty explained that the best path for the models is to rely on data with a sufficiently long time series. The plan is to use multimodel inference to provide a consensus summary on catch limit advice. Mr. Alexander asked if there is a model that includes the effects of warmer waters on cod and haddock growth rates.

AGENDA ITEM 4– ECOSYSTEM MANAGEMENT ADVISORY PANEL

Presentation

Mr. Applegate explained that in 2014, the EBFM committee had decided that an advisory panel would be needed but not until the Council had begun development on a management plan, since the SOPPS were very specific about the role of advisory panels. He thought it would be a good time for the EBFM committee to begin the discussion about the structure of an advisory panel that it wanted, whether it was one or more regional advisory panels and the desirable makeup of those panels. He said that it takes several months to solicit and vet the applications. By that time, the Council would be further along in the development of an example fishery ecosystem plan and would be better positioned to begin engaging the public and stakeholders in its evaluation and revision. Mr. Applegate said that there wasn't a rush at this point to form an advisory panel, but the spring of 2016 could be a good time to begin the process.

Discussion

Mr. Pappalardo added that it will take time to vet the advisory panel (AP) membership through the Executive Committee, but an AP could be a good way to roll out a plan with the public. He thought the AP should eventually be tailored to the ecosystem production unit (EPU) range. Mrs. Tooley thought that an AP would be needed only when we have materials in place and we

are asking for specific comments. Mr. Reid agreed that we need to begin with what the EPU structure will look like, and then choose AP groups based on them.

Dr. Sissenwine thought that there might be more than one approach, but at this stage we need advisors suitable for wide strategic advice, but with more focused groups later. As for structure and makeup, he wondered whether the membership of the EBFM Committee should be expanded to include non-Council members. He commented that there may be more than one useful approach, but at this stage we need advisors suitable for wide strategic advice, with more focused groups later. Mrs. Tooley commented that instead of including non-Council members on the committee, there have been processes where the AP and committee met together. She said that sometimes it worked well and other times it did not work well, depending on size of the AP and committee.

Public comment

Erica Fuller commented that she was not sure if a separate AP or joint AP/committee is the right way to go. It would be more important that a diverse group be at the table. This would ensure that other points of view that would be worth hearing from would have a say. Jud Crawford agreed that an AP that included a diversity of views of the ecosystem and how it interacts with fisheries is important. He thought a diverse AP is essential to success. He said that an Omnibus AP would be the way to go now, later more than one AP would become more focused on individual EPUs later.

The EBFM Committee meeting began at 9:15 am adjourned at approximately 3:30 p.m.