



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*

## DRAFT MEETING SUMMARY

### Ecosystem Based Fishery Management (EBFM) Committee

DoubleTree Hotel, Danvers, MA

July 31, 2014

The EBFM Committee met on July 31, 2014 in Danvers, MA to: receive reports and presentations on various topics and issues, including new research results on perceptions of stake holders and managers about EBFM; on climate change vulnerability, science, and governance; on a ecosystem indicator reports, and potential terms of reference considering ecosystem and climate change effects in stock assessments. The Oversight Committee also discussed roles, responsibilities and composition of a potential future Advisory Panel.

**MEETING ATTENDANCE:** Tom Dempsey (Chairman), Mike Sissenwine (Vice Chair), Terry Alexander, Frank Blount, Doug Grout, David Pierce, David Preble, John Quinn, Mary Beth Tooley, Chris Zeeman (Lee Anderson absent); Andrew Applegate and David Thomas (NEFMC staff); Rich Seagraves (MAFMC staff); Jen Anderson, Danielle Palmer and Diane Borggaard (GARFO); Michael Fogarty, Kristin Kleisner, Sarah Bailey, and Jon Hare (NEFSC); and Ingrid Beidron (Cornell University). In addition, approximately 8 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>).

#### **KEY OUTCOMES:**

- The Committee took the reports on EBFM perceptions and climate change under advisement. Dr. Hare will present the final vulnerability assessment report at a future meeting.
- The Committee gave Dr. Fogarty helpful feedback and advice on a draft ecosystems indicator report. Dr. Fogarty will present a revised draft at a future meeting. He asked the Committee to have the PDT review a preliminary Georges Bank multispecies assessment to give him and staff feedback and advice. This work will be presented at a future EBFM PDT meeting later in the fall when the draft assessment is ready.
- The Oversight Committee will recommend that the Council write a letter to Dr. William Karp, NEFMC Director, to have staff work closely with a NEFSC working group on EBFM terms of reference. The Oversight Committee recommends that the Council

forward a draft EBFM term of reference for NEFSC consideration.

- The Committee decided that an Advisory Panel (AP) could facilitate development of a Fishery Ecosystem Plan or Ecosystem Management Planning Document, but it was too early at this point in time for the AP to begin work, after the Council decided on an approach to develop EBFM policies and EBFM goals.
- The Committee decided that the chair and staff should develop a meeting agenda at the next opportunity.

Mr. Dempsey opened the meeting with an introduction about the order of the meeting and expected outcome. It started out with a presentation by Ingrid Beidron on her dissertation on EBFM perspectives.

#### ***PRESENTATION 1 – NATIONAL FISHERY ECOSYSTEM POLICY – INGRID BIEDRON***

The presentation and research was based on a sociological survey of stakeholders (fishermen and conservationists), managers (Council members, state managers, etc.), and staff scientists. There was considerable agreement among groups about EBFM, that it was a desirable endeavor in theory, but there was some concern about the specifics of a fishery ecosystem plan. Many felt that there were some impediments in the Magnuson Stevens Act to developing EBFM policies, yet some other Councils have developed EBFM policy documents and the NMFS perspective was that EBFM could be developed within the current management framework. Most stakeholders thought that early involvement in the process of developing EBFM policies was desirable.

#### **Discussion**

Most committee members thought that the research was well done, helpful, and informative. Many of the details would need time for members to review and digest after the meeting. Many committee members thought that the concern about specifics arose from a fear of an unknown outcome and potential negative impacts on fishery revenue (i.e. setting lower harvest ceilings to accommodate ecosystem needs and achieve a broader definition of an ecosystem MSY). The committee generally agreed that EBFM development was possible under the Magnuson Stevens Act, but it might require some changes to the National Standard guidelines to accommodate multispecies/ecosystem management. Dr. Sissenwine added that it was clear that an incremental EBFM approach could be developed with existing laws, developing a revolutionary fishery ecosystem plan may face some impediments. Dr. Pierce said that there was broad recognition that single species management leads to inadequate science and inefficient harvesting limits. He thought that the issues cannot be addressed until the Council develops clear EBFM goals and objectives.

#### ***PRESENTATION 2 – CLIMATE VULNERABILITY ASSESSMENT – DR. JON HARE***

Dr. Hare summarized the process that he was leading to characterize the vulnerability to climate change (increases in temperature, decreases in acidity, increasing precipitation, increasing sea

level, etc.) for all managed species in the Northeast region. Vulnerability was defined as a combination or product of degree of exposure to environmental change and sensitivity of the species to those changes. He explained how the evaluations were conducted by five scientific experts on each species to assess and rank vulnerability.

### Discussion

Answering a question from Mrs. Tooley, Dr. Hare said that the general plan would be to update the vulnerability assessment approximately every five years, timed after the IPCC updates on climate change predictions.

The committee discussed the appearance that the Northeast region has and is projected to experience one of the highest rates of change (exposure) in the world, due to its temperate location. The projections indicated that a rise in average sea surface temperature of 1.5°C was likely in this region. Dr. Hare confirmed that this predicted temperature change was on the higher side of the various IPCC projection models. There was a paper published by Dr. Fogarty et al. that estimated a 30% decline in Georges Bank cod productivity for a 1°C rise in water temperature. Dr. Sissenwine asked whether it was more likely that climate change would affect the productivity of a stock or its carry capacity.

Asked about how the Council might use the information and guidance, Dr. Hare said that the Council and NEFSC could use the results to triage when and where it is important to consider climate effects on stocks, stock assessments, and management effectiveness.

Annie Hawkins (Fishery Survival Fund) asked if there was consideration of the degree of evolutionary adaptation to climate change. Dr. Hare replied that that was not considered in this round, but would be a good thing to consider in future rounds. Adaptation would be more likely to depend on generations time (editor's note: and genetic mutation rate) of a species or stock, one factor that was taken into consideration during this assessment round. In terms of management, Dr. Peter Shelly (Conservation Law Foundation) thought that adaptive changes in distribution would be very important to assess for managers to consider in future actions. Mr. Applegate added that changes in bottom water temperature rather than surface water temperature would be an important consideration. Dr. Hare agreed that bottom temperatures should be examined and that data exist, but they are not yet linked or related to the climate model predictions.

### ***PRESENTATION 3 – CLIMATE SCIENCE AND GOVERNANCE – RICH SEAGRAVES***

Mr. Seagraves gave a presentation summarizing the Climate Science and Governance Workshops sponsored and coordinated by the Mid-Atlantic Council. He said that the results from the Climate Governance Workshop were due to be released and published soon. He reported that the Science Workshop focused on potential effects on recruitment, growth and mortality. One inconsistency that he identified was that climate change was expected to cause greater variability in conditions and effects, yet most stakeholders sought greater stability in catch limits and management, not more responsive changes. The Governance Workshop mostly focused on jurisdictional issues on how to coordinate management across different authorities. Also, many recognized or predicted that bycatch and choke species would become more problematic with greater climate change.

## Discussion

Dr. Pierce noted that the Science Workshop had relatively low turnout, possibly due to poor weather, but that there is a greater need for involvement of stakeholders in the science. Dr. Pierce, Mrs. Tooley, Dr. Sissenwine, and Mr. Preble identified the need to develop adaptive management systems rather than static output controls that are not plastic and often are unresponsive to change. Mr. Preble pointed out that the new limits and constraints on regulations like permits prevent natural adaptation by fishermen to new conditions, as had happened before Council management.

Mr. Grout added that the Governance Workshop participants discussed combining Councils in some way and that the ASFMC was better situated to implement adaptive management throughout the range.

### ***PRESENTATION 4 – ECOSYSTEMS STATUS INDICATORS REPORTS – ANDREW APPLGATE (NEFMC) AND MIKE FOGARTY (NEFSC)***

Mr. Applegate summarize the characteristics of ecosystem reports from the Pacific and North Pacific Fishery Management Councils and from Australia, given examples of the type of key indicators, the structure and length of reports, and types of graphical and tabular information in the reports. Dr. Fogarty presented a preliminary draft ecosystems status report for the Northeast region that he and staff completed for the meeting, reviewing its contents and asking for advice and feedback about what managers and staff felt were useful or missing.

## Discussion

Mr. Dempsey thought that the type of report prepared for the California Current System would be a good type of report to emulate, about 20 pages long. He saw it as a means to inject greater amounts of ecosystem information into the Council's management decisions. Eric Fuller (Earth Justice) suggested that the report should provide some detail about forage fish composition and the status of large predator populations. Dr. Pierce added that the report should also include information about trends in marine mammals, particularly seals which are now thought to target and prey on flounders.

Dr. Pierce thought a measure of "ecological integrity" was an important consideration for inclusion in a report, a measure of diversity of the forage base. Dr. Fogarty asked what the committee thought of some type of warning signal, defined as thresholds, reference points, or action levels. There was some support for this, but committee members were unsure what it would look like or what action it might trigger.

Mr. Zeman thought that a summary of recruitment effects would be very useful. He favored a more detailed report, even if it added to the number of pages. Mr. Applegate added that some type of indication placed on the various graphs about which species would find a trend favorable or unfavorable to its productivity. Dr. Pierce also supported a more in-depth discussion of the

negative or positive effects and also asked about having a summary of the effects and location of the Gulf Stream position and the frequency and intensity of warm core eddies on the shelf.

***PRESENTATION 4 –EBFM TERMS OF REFERENCE FOR ASSESSMENTS – ANDREW APPLGATE (NEFMC)***

Mr. Applegate gave a presentation summarizing the terms of reference previously included in SAW assessments that were related to ecosystem or climate change effects. He said that the process of including them was ad hoc, depending on the available information to analyze and the perceived effect on productivity of the species. Mr. Applegate reported that he had spoken with Dr. Jim Weinberg at the NEFSC and recognized the concern about adding workload to analyze a greater variety of effects and that the SAW makeup may need to be expanded to accommodate review of ecosystem effects. Mr. Applegate thought that there might be a tradeoff between more robust models with more accurate results versus the number of assessments and updates that are now being requested. Mr. Applegate presented the committee with two generalized terms of reference to evaluate and analyze the effects of climate change and trophic relationships on a) productivity of a stock and b) on precision and accuracy of stock size forecasts.

Discussion

Mr. Dempsey pointed out that there were a series of letters between Tom Nies and Dr. Karp about ecosystem terms of reference, which set off a chain of events. Dr. Hare added there was a working group at the center working on this, a steering committee consisting of center leadership.

Mr. Dempsey suggested that the Council should send a letter showing a strong signal of support for developing ecosystem terms of reference for stock assessments and looking forward to working with the Center to develop these. He thought that the letter should advance the presented strawman general terms of reference for further consideration. Dr. Pierce suggested that the two generalized terms of reference should be combined into one, addressing both effects on both stock productivity estimates and forecasts.

***PRESENTATION 4 –ADVISORY PANEL ROLES AND RESPONSIBILITIES– ANDREW APPLGATE (NEFMC)***

Mr. Applegate summarized the important clauses and conditions in the Council Standard Operating Procedures for appointment and use of Advisory Panels (AP). He also summarized the authorities and approval process for appointing an AP. Key considerations were that the APs should be given specific tasks to facilitate development of an FMP or amendments, that the AP requires approval by the full Council, but that membership is reviewed by the Oversight Committee and approved by the Executive Committee.

Discussion

Mr. Preble thought that the Oversight Committee and Council should make more progress on developing goals and objectives before appointing an AP to assist with further EBFM

development. Dr. Sissenwine agreed that AP meetings at this point would be premature, especially since the Oversight Committee meetings were completely open to public comment and participation. He thought getting the PDT to work should be a higher priority at this stage. Mr. Preble also agreed that the Council should hold off on formulating an AP until some central questions had been decided. Some of these questions were identified in Ingrid Beidron's presentation this morning. Mr. Grout also thought that the Council should wait until we have specific tasks to give to the AP.

Mr. Applegate warned that although it seems desirable to hold off at this point, that it would take at least 3-4 months to seek Council approval for one, solicit applicants, and seek approval and appointment of qualified applicants.

The committee consensus after discussion was that an AP would be helpful at a later stage of the process.

#### Other issues

Mr. Alexander recommended that the EBFM Oversight Committee consider whether a priority action should be undertaken to classify windowpane flounder as an ecosystem component. Most committee members thought that this was an issue for the Groundfish Oversight Committee.

The EBFM Committee meeting began at 9:00 am adjourned at approximately 5:00 p.m.