

MAFMC SSC Ecosystems Subcommittee (ESC) Meeting

Summary Notes

June 30, 2011

ESC Chair J. Link called meeting to order at 1:05 p.m. Subcommittee members in attendance included W. Gabriel, C. Jones, T. Miller, and E. Houde. Also participating were R. Robins and R. Seagraves. Purpose of meeting was to discuss how the ESC is addressing the Ecosystem TORs provided by the Council.

The primary issue relative to TOR 1 involves the development of a process for the ESC and Council to work together to develop the Council's ecosystems goal and objectives. A white paper which outlined several strategies which could be employed to accomplish this was discussed. T. Miller described the successful effort of FISHSMART which was used to establish a consensus among recreational king mackerel fishery stakeholders in the South Atlantic. The two most important factors in reaching consensus among stakeholders included 1) genuine "buy-in" by stakeholder to the process (i.e., they assumed ownership of the process and hence the outcome) and 2) sustained stakeholder participation. The ESC could work with the Council in such a process to develop the Council's vision for ecosystem based fisheries management.

R. Robins noted that development of ecosystem goals and objectives is an interface between science and policy. The primary objective is to determine what is technically feasible given the current state of the ecosystem related science and to align the Council's ecosystem goals and objectives such that Council ecosystem policy does not get ahead of it. The group generally agreed that an iterative process involving a broad range of stakeholder interests should be considered by the Council. The Council's Visioning Project appears to be an excellent vehicle to garner stakeholder input relative to ecosystem policy development. Another idea discussed was the creation of an Ecosystems Advisory Panel which could provide advice and stakeholder input to the Executive Committee and Council as they develop ecosystem goals and objectives.

E. Houde noted that it is imperative that the Council develop a vision of where they are going with EBFM. Then core principles could be applied to enable the Council to achieve its EBFM goals and objectives. The group agreed that it would be highly desirable for the Council, working with stakeholders, to determine a short and long term vision for EBFM. However, the role of the ESC is to assist the Council in this endeavor and a good place to start would be for the ESC to develop a "strawman" identifying core EBFM principles and some examples of ecosystem goals and objectives for the Council to discuss. A focused discussion of candidate "strawman" goals and objectives will be planned for the next SSC meeting.

Action Item #1: The ESC will recommend that the Council explore the following to move towards developing ecosystem goals and objectives: A) include an ecosystem module in the forthcoming

Council visioning exercise; B) consider establishing an Ecosystem Advisory Panel; and C) consider specific, facilitated topical workshops after A and/or B are considered.

Action Item #2: E. Houde agreed to present EBFM goals and objectives (from various sources) as “strawmen” to be discussed by the full SSC at its July meeting.

It was also noted that at the June Council meeting, there will likely be an additional, standing TOR adopted for the SSC in the quota setting process that will contain some reference to ecosystem considerations. This will serve as a placeholder to move forward on the topic until the overarching goals and objectives can be further codified.

Next J. Link presented a working definition of a forage species and a proposal to incorporate a forage protocol within the ABC specification paradigm adopted by the Council and SSC. The group discussed the proposal and asked if it had been used anywhere else. J. Link noted that not explicitly but a similar approach has been used in the Antarctic to manage krill. The ESC recommended that the proposed approach be applied to the squid, mackerel, butterfish species complex to determine ABC recommendations utilizing the proposed protocol.

Action Item #3: J. Link agreed to conduct this analysis and report the results at the July SSC meeting.

It was noted that the Lenfest Forage Project and MSC reports should be out soon, both of which are independent efforts to define forage species and protocols for their conservation and management (i.e., both reports should also inform the Council relative to the forage definition issue). They should inform the forage discussion.

The next agenda item was a discussion of the development of the Council’s longer range goals for EBFM and how they might relate to larger EBM issues. A number of regions around the US are adopting system level caps on biomass removals based on geographically defined spatial management units (large scale ecosystems). In addition, there has been a lot of activity, both regionally and nationally, in the area of Coastal and Marine Spatial Planning and the Council needs to consider these broader governance and management issues in the longer term. As further estimates and calculations of these features are developed, the ESC will be kept apprised.

The group then briefly discussed what other regions and countries are doing with respect to EBFM. The MAFMC is hosting the National SSC IV meeting which should provide an excellent opportunity to compare EBFM approaches among the Councils and how each SSC is providing scientific advice on this topic.

Guidance for Developing Ecosystem- Based Approaches for Fisheries Management in the Mid-Atlantic Region

Presentation
SSC Subcommittee on EBFM
27 July 2011

E. D. Houde

Thoughts on EBFM. Hilborn (2011)

Phase 1.

“The most important elements of EBFM are keeping fishing mortality rates low enough to prevent ecosystem-wide overfishing, reducing or eliminating by-catch, and avoiding habitat-destroying fishing methods.”

Phase 2.

“Extended EBFM that consists of considering trophic interactions and area-based management.”

Developing a Vision

What does the Council Envision for EBFM in the Mid-Atlantic Region?

May I suggest:

1. A productive and healthy ecosystem.
2. Sustainable, productive, and profitable fisheries.
3. Recognition and respect for ecosystem services other than fisheries.
4. An engaged, broad stakeholder community.
5. A responsive, adaptive management system.

Goals Statement

- What specifically does the Council hope to achieve?
- In what timeframe?
- Define measures of success
- Adopt goals that do not limit a range of management actions

Overarching Principles

- Do no harm to the ecosystem (or as little as possible)
- Be an advocate for the ecosystem and services it provides
- Adopt, accept, and promote the precautionary approach
- Respect the broad community of stakeholders

EBFM Represents a Shift in Management Priorities and Perspective

Emphasis shifts from management of single species to achieve high yield and profit, generally by controlling catch and effort, to management that assures long-term productivity, a high level of ecosystem services, sustainable fisheries, and sustainability of the ecosystem itself.

Why develop and implement ecosystem-based approaches to fisheries management in the Mid-Atlantic region?

- To conserve the productivity, structure and resiliency of the coastal ecosystem
- To respect uncertainty; reduce risk of management failure
- To follow the “precautionary approach.” Do No Harm!
- To preserve options of future generations.

How can we gauge success?

- Indicators and Reference Points
- Limits and Thresholds
- Multiple Indicators
- Triggers for Action
- Spatially Explicit Actions

All of these may sound familiar and little different from what has been used in single species management, but the particular indicators, levels and limits, and triggers could be different. For example, F levels of forage species could be set much lower than traditionally or B could be higher. Or, the level of F and B on a predator might be regulated to manage a forage fish species.

EBFM Represents a Shift in Management Priorities and Perspective

- Conserve ecosystem integrity and resilience
- Promote habitat and water quality
- Pay particular attention to maintenance of key predator-prey relationships
- Manage total removals from the ecosystem

What Immediate Steps Can Be Taken to Adopt EBFM?

- Continue risk-averse, single-species fisheries management.
 - Set target fishing mortality levels below those that yield MSY.
 - Maintain adequate spawning stock biomass and fecundity.
- Regulate or deny use of gears that are destructive of key habitats or which result in unwanted bycatch.
- Reduce or eliminate bycatch.
 - Young and small individuals of targeted species.
 - Untargeted species, including threatened and endangered species.
- Consider and initiate development of new indicators and reference points.
- Rigorously enforce fisheries and environmental laws and regulations.

Intermediate Steps

- Place a cap on total fisheries removals from the ecosystem.
 - The cap should be flexible and adaptive, responsive to shifts in productivity of the ecosystem.
- Explicitly account for predator-prey interactions.
 - Recognize critical predator-prey interactions and manage to conserve prey resources.
 - Develop and incorporate multispecies modeling into assessments.
- Expand the use of spatially-explicit management approaches.
 - Managed areas.
 - Temporal-spatial management measures.
- Increase stakeholder involvement in the management process.
 - Further democratize diverse stakeholder inputs.
 - Recognize the diverse stakeholder interests (including, but beyond fisheries).

Long-term Steps

- Recognize and account for externalities.
 - Account for long-term shifts in productivity (e.g., climate change).
 - Improve water quality.
- Restore damaged habitats.
- Manage to conserve food-web structure and function.
 - Incorporate ecosystem modeling into assessments.
- Build on and expand on a “managed areas” approach.
 - Ultimately, zoning and networking to achieve EBFM and broader ecosystem management goals.
- Review institutional and governance structures to support EBFM.
 - Strengthen inter-agency collaboration and cooperation protocols.
 - Consider possible need for new institutions.
- Formally embrace and implement a broadly adaptive and integrative management approach to insure sustainable fisheries and continuation of other ecosystem services.

What is the Best Pathway?

- Build on Single Species management?
- Move aggressively towards Multispecies management?
- Develop and Implement a broad “ecosystem plan?”