

DEBRIEF: Atlantic Herring Management Strategy Evaluation

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Council Staff**

**Herring AP/Cte. Mtg.
Sept. 10, 2019**



**New England
Fishery Management Council**

Outline

1. Update on Amendment 8 Management Strategy Evaluation (A8 MSE) debrief
2. Recall A8 MSE process
3. Summarize debrief input to date
4. Outline today's plan for input/discussion

Review input to date and provide detailed feedback:

*Perceptions, Pros/Cons, Lessons learned or ideas for improvements,
Help inform future Council decisions on use of MSE.*



I. Plan for A8 MSE Debrief

- Aim to finish in 2019.
- Using a survey for input was not possible, due to Paperwork Reduction Act constraints.
- Instead, soliciting written public comments and direct input from PDT, AP, and Committee.
- 10 specific topics to help focus input.

1. Was the purpose and need clear?
2. General education sufficient?
3. Utility of 6 phases of MSE process?
4. Use of open invitation workshops?
5. Utility of MSE results?
6. How well Council integrated the MSE?
7. Utility of MSE in balancing tradeoffs?
8. Benefits, if any, in using MSE?
9. How the MSE process compared to more normal Council process?
10. Other comments



I. Plan for A8 MSE Debrief

Timeline:

July-August	Public comment period, PDT input
→ Sept. 10	Herring AP/Cte mtg – input and discussion
Sept. 23	NEFMC - update
Fall	Drafting report, Cte may review???
December	NEFMC receives final report

Bottom line:

TODAY is your main opportunity for input.



2. Amendment 8 MSE Process

- Atlantic herring managed since 2007 with harvest control rules (HCR), revised several times.
- In 2015, Council initiated A8 to consider HCRs that better account for herring's role in ecosystem.
- Council hoped to implement a “long-term” control rule in 2018 to be used to develop 2019-2021 specs.
- A. Herring was assessed to be near carrying capacity; uncertainties suggested actual biomass may be lower.
- Managers hoped MSE could help:
 - Test assumptions and uncertainties,
 - Provide greater upfront discussion of objectives, and
 - Quantify tradeoffs of alternatives.

Did the A8 MSE process accomplish this?



2. Amendment 8 MSE Process

Six phases over about 2 years

1. Workshop I – identify parameters to be tested, general education about MSE.
2. Simulations – develop/refine models, PDT review and input.
3. Workshop II – review results, identify improvements.
4. Prep for peer review – finalize analysis.
5. Peer review – SSC member and outside experts.
6. Incorporate into DEIS – develop alternatives, impact analysis.



2. Amendment 8 MSE Process

Some decisions made along the way

1. **Timing** – MSEs typically take several years to develop, our target was 1.5 years.
2. **Who should be included** – open or invite only?
3. **Education** – how much is needed before and during the process, what are the best approaches and tools?
4. **At each workshop** – which background materials to provide, what type of facilitators, various presentation styles, level of PDT involvement, large and/or small group discussions, level of Council member participation at workshops.
5. **Presentation of results** – various methods used, contractors helped towards the end.



3. Input to date

- PDT input developed at August 5 meeting. See Aug. 23 memo. Range of input described, not necessarily consensus.
- Nine public letters. See Aug. 28 summary. NEFSC, herring fishery (3), environmental NGOs (2), other interested public (3).



3. Input to date

I. Clarity of purpose and need for using MSE

PDT

Mixed.

It was well described but may have been lost on some of Council members and public. Better articulate how the process would work.

Public

Was clear.

Was the Council more interested in testing MSE than using MSE for herring?



3. Input to date

2. Sufficiency of general education about MSE

PDT

Mixed.

More effort was spent on education than usual, but insufficient. Time constraints. Need layman's version and interactive tools.

Public

Mixed.

Did a good job, but still too technical. Level of preparation varied. Need a mix of materials. Fishermen unlikely to attend informational webinars; spend resources elsewhere?



3. Input to date

3. Utility of the six distinct phases of this MSE

PDT

Each phase was rushed. Would the Council have been willing to extend the A8 timeline?

Public

MSE path was logical. Some appreciated the timeline, others felt rushed.



3. Input to date

4. Suitability of open-invite, public workshops

PDT

Mixed.

Council-run meetings must be public. Open-invite was difficult, but may have been best due to timeline, newness and controversy.

Public

Mixed.

Benefits of participant diversity, but insufficient common understanding. Did politics trump science? New participants brought new insights/data. Expanded “stakeholder” concept.



3. Input to date

5. Utility of how MSE results were presented

PDT

Difficult.

Overwhelming amount of technical material. Improved with repetition, varying approaches and contractor help.

Public

Difficult.

Hard to make tradeoffs. Managers ill-prepared. Graphics made quickly. Needed more text descriptions. Timeline limited communication efforts.



3. Input to date

6. How well the Council integrated MSE into A8

PDT

Mixed.

The MSE shaped the alternatives and analysis. Process, linkages, expectations could have been more explicit. Needed a lot of work after workshops to pare down alternatives.

Public

Pretty well.

Council needed more ownership of MSE and rationale for including workshop input.



3. Input to date

7. Utility of the MSE in balancing tradeoffs

PDT

Mixed.

Made contrasting alternatives easier. Some model constraints were misused.

Public

Mixed.

Final alternative balanced tradeoffs? Council leaned on short-term analysis? Should have been more iteration? Workshop input imbalanced?



3. Input to date

8. If benefits of using MSE outweighed costs

PDT

Mixed.

More input, analysis, justification. Hindered by data availability, time, newness, too technical.

Public

Mixed.

Inclusion, transparency, compromise outcome. Workshops got sidetracked. Timeline short-changed potential utility.



3. Input to date

9. How this MSE process compared to how else A8 could have been developed and analyzed

PDT	More input, intention, structure, transparency, performance-based, analysis.
Public	Mixed. More political? Same analysis could have been done otherwise? Would ecosystem and predator impact have been considered?



3. Input to date

10. Other comments	
PDT	A lot of work. Tough to consider localized depletion alternatives simultaneously.
Public	Appreciated the effort. Need more economic analysis and spatial considerations in future. General concerns about herring management, less related to MSE. Status quo CR was just fine.



MSE peer review by SSC subpanel (March 2017)

Strengths

- Timeline aligned with management needs.
- Outreach to stakeholders.
- Process was collaborative, educational, flexible, transparent.
- Lead facilitator was an MSE expert.



MSE peer review by SSC subpanel (March 2017)

Areas of Improvement

- Less constrained timeframe. Needed more:
 - Workshops (one more?).
 - Education to manage stakeholder expectations.
 - Time/ability to modify operating models.
- Improve stakeholder process
 - Have an open scoping mtg, followed by working group mtgs.
 - Improve methods for getting input within workshops.
 - Small group discussion facilitators should have MSE expertise.
 - Have more targeted outreach to diversify participation.
 - Increase focus on social science objectives and metrics.



“Integrating MSE into fisheries management...” (CJFAS, 2019)



ARTICLE

Integrating management strategy evaluation into fisheries management: advancing best practices for stakeholder inclusion based on an MSE for Northeast US Atlantic herring^{1,2}
R.G. Feeney, D.V. Boelke, J.J. Deroba, S. Galchas, B.J. Irwin, and M. Lee

Abstract: The New England Fishery Management Council used management strategy evaluation (MSE) to evaluate possible harvest control rules for Atlantic herring (*Clupea harengus*), the main MSE in the US and perhaps globally to use open-air, public workshops to engage stakeholders. Stakeholder inclusion can increase both realism and likelihood of use by managers, but increasing it is not always easy. Here, we selected participants that diverse management and advisory levels of interest and engagement. We describe some challenges with directly engaging the public in MSE and offer transferable insights for obtaining effective public participation during a decision-making process. Conducting an open MSE aligns well with public advisory management but requires clear goals and consensus about investment in effective organizers, impartial facilitators, and knowledgeable analysts can improve communication and understanding of MSE to the betterment of fisheries management. We aim to further MSE best practices on integrating stakeholders and hope that our lessons learned on communication, engagement, and integration of MSE into an existing management arena will be useful to other practitioners.

Résumé: Le New England Fishery Management Council a utilisé l'évaluation des stratégies de gestion (ESG) pour évaluer des règles possibles de contrôle des prises pour le hareng de l'Atlantique (*Clupea harengus*), ainsi la première ESG aux États-Unis et probablement dans le monde à employer des ateliers publics ouverts à tous pour obtenir des renseignements. Si l'inclusion des parties prenantes peut rendre plus réaliste et probable l'utilisation par les gestionnaires, l'absence de l'inclusion n'est pas chose facile. Les participants volontaires professionnels des analystes variés et adhésifs degrés d'intérêt et de participation. Nous décrivons certains défis que pose l'intégration directe du grand public à l'ESG et offrons des suggestions plus larges pour en arriver à une participation publique efficace durant un processus décisionnel. La réalisation d'une ESG ouverte s'aligne bien avec une gestion axée sur l'appui du grand public, mais nécessite des objectifs et une communication clairs. Le recours à des organisateurs efficaces, des facilitateurs impartiaux et des analystes bien informés peut améliorer la communication et la compréhension de l'ESG, pour une meilleure gestion des prises. Nous visons à pousser plus loin les pratiques de gestionnaires d'ESG en matière d'intégration des parties prenantes et espérons que les leçons que nous avons tirées sur la communication, la participation et l'intégration des ESG dans les pratiques de gestion existantes seront utiles pour d'autres intervenants. (Traduit par la Rédaction)

Introduction

Management strategy evaluation (MSE) generally involves defining a decision problem, specifying objectives, and simulating the managed system to help evaluate uncertainties, risks, and trade-offs of management alternatives. The MSE approach was first developed through the International Whaling Commission (IWC) in the 1980s (Punt and Douvan 2007), though the South African lake fishery (Methuen 1992) was perhaps the first case where an MSE was integrated into management decisions. In the early 1990s (Cremerman et al. 1999; Holland 2005), application of MSE has become more common globally over the past 30 years (De Oliveira et al. 2008; Punt et al. 2016), primarily for quota-managed fisheries, though the approach remains a departure from the status quo for many fisheries. In the US, the National

Marine Fisheries Service (NMFS) is now expanding capacity to broaden the use of MSE (SERFAC 2018).

Stakeholders have been involved in MSEs to varying degrees. On one end of the spectrum is a process in which scientists identify parameters and conduct modeling largely separate from the management arena (e.g., Deroba 2016; Taylor et al. 2016). On the other end, stakeholders participate throughout the MSE (e.g., Jones et al. 2016). It appears that stakeholder integration typically involves working with small groups of selected representatives. In the case of South African lake and New Zealand rock lobsters (two fisheries), MSE stakeholder participants were quota holders and their industry associations, which have legal rights to participate in management processes on behalf of the fishery (Holland 2005; Smith et al. 1995) detail the early Australian Fisheries Man-

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¹This paper is one of a pair of companion papers published in the issue of *Can. J. Fish. Aquat. Sci.* (Deroba et al. 2019; Can. J. Fish. Aquat. Sci. This issue; doi:10.1139/CJFAS-2018-0126).

²This article is being published as part of the special issue “Under pressure: addressing fisheries challenges with Management Strategy Evaluation” arising from the virtual theme workshop by the American Institute of Fisheries Biology and the 14th Annual Meeting of the American Fisheries Society, Tampa, Florida, USA, August 2017.

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- Wield the double-edged sword of inclusivity
- Manage expectations
- Communicate simply
- Stand at a new vantage point
- Build capacity
- Evaluate the evaluation



4. Today's plan for input/discussion

- Next 30 min - All attendees invited to write specific input for all ten topics:
 - Write on Post-it notes (Cte, AP, public)
 - *Write perceptions, pros/cons, lessons learned, ideas for improvements AND RATIONALE*
 - Place Post-its on corresponding flip chart
- Over lunch - staff will organize and summarize input.
- Facilitated large-group discussion of each topic.
 - 10 min per topic
- After meeting – staff will summarize input in final report.



Ground Rules

- Write neatly! Your post-its can be anonymous, but we may ask for clarification.
- Avoid distractions (use technology for MSE debrief).
- Focus on ideas and experiences, not on people.
- Speak from your own experience.
- Staff – keep discussion on track, avoid influencing.
- Participants – ensure quality input and discussion (generate ideas, provide insight, actively listen).



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7. Utility of MSE in balancing tradeoffs?
8. Benefits of MSE? Outweigh costs?
9. How the MSE process compared to more normal Council process?
10. Other comments