

Development of the Mid-Atlantic Council's Ecosystem Approach to Fishery Management Update and Next Steps

The Scientific and Statistical Committee was asked to develop a list of ecosystem issues which should be addressed in the Council's effort to develop an Ecosystem Approach to Fishery Management Guidance Document. In addition, the SSC was asked to make a first order approximation as to where in the science-management continuum each issue should be addressed. The purpose of this exercise was to identify the information necessary to inform development of an EAFMG document. The SSC discussed the need to begin the ecosystem approach planning effort by identifying the most important topics which can reasonably be addressed in the short to mid-term. It was noted that a number of other ecosystem based efforts have focused on social and economic considerations, most notably in Australia.

The SSC then discussed the experience many members have had in the Chesapeake Bay Ecosystem planning effort. A notable problem is the one of scale - what is the extent of the ecosystem plan with respect to scale? For some species/issues, the entirety of ecosystem considerations is encompassed within the Mid-Atlantic ecosystem(s), while for others many of the ecosystem drivers act outside of the Mid-Atlantic. In addition, climate and other drivers may cause stock distributions and/or productivity to shift or change, so the current baseline can be expected to change as well. However, there are examples of things that can be addressed and are within the control and scope of the Mid-Atlantic Council - e.g. habitat for black sea bass.

The sense of the SSC was that as a practical matter, we can't escape the fact that we are currently operating under a single species assessment/management framework. Thus the starting point is to examine each ecosystem issue relative to the current single species approach. It was suggested that a reasonable approach would be to focus on areas where immediate progress can be made, while still identifying the range of issues that need to be addressed in a comprehensive fashion. It was generally agreed that a way forward would be to develop a comprehensive list of ecosystem considerations and develop a transition plan to move towards EBFM starting with a few key issues that can be addressed now or in the near future. A key outcome is the identification of the information necessary to support an ecosystem based approach. A risk analysis should be conducted to help prioritize the order in which ecosystem issues are addressed. This will require a collaborative/iterative approach between the Council, the SSC and the public.

The SSC emphasized the need for a short, focused document which outlines each issue and potential approaches to address them (1-2 pages per issue). It is also important to note that some issues are scientific in nature while others are strictly grounded in policy - these are critical distinctions which need to be made. The purpose of the exercise which followed was to comprehensively identify the universe of ecosystem considerations and to identify where in the current process they should be addressed. Each issue was also binned as to whether it could be addressed in the short, mid, or long term. It may be necessary to create new processes to address some of these issues and the Council will most likely be required to modify and/or expand its current risk policy in this regard. In terms of priorities, the SSC identified the following as important areas to begin addressing: assessment and management considerations for forage/low trophic level species, species interactions (predation, competition, etc.) and their effects on

reference points and management objectives, and social/economic considerations. The issue of shifting species distributions as a result of systematic changes in oceanographic conditions within the ecosystem(s) (due to climate change) was also discussed, as well as the need to coordinate management efforts with other Councils, the states and other nations.

Staff Recommendation - Next Steps

Staff recommend that a working group be formed drawing on existing expertise from the SSC, Northeast Regional Office and Fisheries Science Center (WG to be led by Council staff). The working group will develop the background material necessary to assist the Council in the formulation of policy and management approaches in an operational guide which addresses the issues identified in the ecosystem considerations matrix (Table 1). Based on discussion at the Council, SSC meetings and feedback thus far from stakeholders in the Council's Visioning process, this effort should initially focus on the following issues:

1. forage/low trophic level species considerations and management
2. species interactions (competition, predation) and their effects on sustainable harvest policy and ecosystem structure and dynamics
3. incorporation of social and economic considerations in OY determinations
4. effects of systematic changes in oceanographic conditions on abundance and distribution of fish stocks - ramifications for existing management approaches/programs
5. incorporation of habitat conservation and management objectives in the current management process.

To address these issues the Council should plan to hold a series of workshops/symposia which focus on each specific topic area. The purpose of these workshops will be to bring together technical experts, fishery managers and stakeholders to fully evaluate and discuss the scientific and policy aspects of each issue and develop recommendations for best practices to address each issue in the Council's ecosystem approach to fishery management operational guide.

In addition to the focused effort on the topics identified above, the WG will develop background briefs (1-2) which will describe each of the issues in the ecosystems considerations matrix, where in the process they should be addressed as well as some possible approaches to dealing with each issue. In addition, the Council, with technical assistance from the SSC and input from stakeholders, should engage in a risk analysis of all relevant ecosystem considerations (Table 1) to inform Council EAFM policy relative to the sequence and manner in which each issue is addressed.

Issue	Lead	7 Review or write	Short, Medium, Long term Feasibility/T	Priority	Hi, Medium, Lo	Can do now	Policy Direction Required	Level/SS	To be Handled - Venue/Process			MRFMCA Nat/Isds	MRFM EFH Role EFH	MRFM Coordination	Priority/Law?/1? MMPA/ESA Consultations/Legislation	Other Agencies NEPA Consultations	Proposed NEFSC/EAW/IOOS IEA	Proposed ROC IEA Output Review
									NESS/SARC/TRAC Stock Assessment	MRFM's SSC ABC	MRFM's MC ACL/ACT							
Standard SAS	S							SS										
Evaluate RPs	S							SS										
Set Catch Limits	S							SS										
Cross-plan Conflicts w/in MAFMC	S							SS										
ASMFMC Coordination	S							SS										
SAFMC Coordination	S							SS										
NEFMC Coordination	S							SS										
HMS Coordination	S							SS										
Int'l Coordination	S							SS										
PS Coordination-Bycatch	S							SS/ESAM										
PS Coordination-Ample food for predators	M							EBFM										
PS-Habitat	M							SS										
Forage Considerations-M on Prey	S							ESAM										
Forage Considerations-Ample food for predators	M							EBFM										
Bycatch	S							SS										
Essential Fish Habitat	S							SS										
Habitat Dynamics/Impacts	S							SS										
Climate Change	M							EBFM										
Biodiversity Concerns	M							EBFM										
Ecosystem Component Spp	M							EBFM										
System Level OY	M							EBFM										
System Level Productivity	M							EBFM										
Climate Change Effects	M							EBFM										
Warming	M							EBFM										
Ocean Acidification	M							EBFM										
Shifting Vital Rates	S							ESAM										
Shifting Migration	S							ESAM										
Change in Stock Production	M							EBFM										
Exiting Fisheries/Fish Stocks	S							SS/ESAM										
Emerging Fisheries/Fish Stocks	S							SS/ESAM										
Sea Level Rise	L							EBM										
Shifting Distribution	L							ESAM										
Invasive Spp	M							EBFM										
Disease	M							EBFM										
Water Quality	L							EBM										
Wetlands	L							EBM										
Oil and Gas	L							EBM										
Navigation	L							EBM										
Tourism	L							EBM										
Military Uses	L							EBM										
Pipelines and Cables	L							EBM										
Dredging	L							EBM										
Dumping	L							EBM										
Toxin Deposition	L							EBM										
Eutrophication	L							EBM										
Coastal Zone Management	L							EBM										
Issues	L							EBM										
Pharmaceutical Development	L							EBM										
Fishery Dynamics (e.g. Fleet Interactions)	M							SS/EBFM										
Regulatory System Dynamics	M							SS/EBFM										
Inherent Aesthetic Valuation	L							EBM										
Market Dynamics	L							EBM										
Social Dynamics	M							SS/EBM										
Culture-historical	L							EBM										
Provisioning Services (food)	S							SS/EBFM										

combine into 1 section (3-5 pages)

Key to Abbreviations used in Ecosystem Considerations Matrix

Acronym (and some definitions)

SA=stock assessments

RP=reference points (biological reference points; fishing mortality targets/thresholds, etc.)

PS=protected species

SS= single species

ESAM= ecosystem approach to management (i.e., extended single species management; an approach that starts from a single species level and expands/evolves to take ecosystem considerations into account)

EBFM= ecosystem based fishery management (top down approach to fishery management based on trying to achieve goals based on pre-defined ecosystem states of nature)

EBM= ecosystem based management (managing the whole of the ecosystem, fisheries being but one component of the system)

EAW= Ecosystem Assessment Workshop

SARC= Stock Assessment Review Committee

TRAC= Trans-boundary Resource Assessment Committee (US/Canada)

IOOS= U.S. Integrated Ocean Observing System

IEA= Integrated Ecosystem Assessment

ROC= Regional Ocean Council

Mid-Atlantic Fishery Management Council
EAFM Guidance Document Development
Revised Timeline

October 2012	Council reviews and approves/modifies next steps
November 2012	WG Formed; begin development of background document (1-2 page briefs on ecosystem issues)
December 2012	WG Progress Report to Council
February 2013	EAFM Workshop1 (Forage/LTL and Species Interactions)
April 2013	EAFM Workshop 2 (Habitat Considerations and Climate Drivers)
June 2013	EAFM Workshop 3 (Social/Economic Dimensions and Risk Analysis)
August 2013	Council Reviews Draft EAFM Guidance document
September	Staff and WG revise document
October 2013	Council approves Final Draft EAFM Guidance document
December 2013	Council initiates any required actions to implement EAFM



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FOR IMMEDIATE RELEASE

Contact:

Maggie Mooney-Seus

978-281-9175

Statement from John Bullard:

Decision to Temporarily Shift the Gillnet Fishery Closure to Protect Harbor Porpoise to February 2013

To provide greater protection to harbor porpoise, I have decided that NOAA is going to take steps to shift, for one year, the gillnet fishery closure in the coastal Gulf of Maine slated for October and November to February and March. The closure will be implemented on February 1, 2013. The location and duration of the closure will remain the same.

Since 2010 harbor porpoise bycatch appears to be higher during February and March when compared to historical bycatch, which was highest in October and November. Adjusting the closure to begin in February should result in fewer harbor porpoise entanglements in commercial gillnet gear, if fishing behavior is consistent with recent years.

With the closure scheduled to begin soon, I felt it was imperative that we act quickly to evaluate this new information given the benefits to both harbor porpoise and fishermen. Normally we would have waited to share this information with the team of fishermen, environmentalists, scientists and managers who developed the original harbor porpoise/gillnet fishery plan when they meet in late October. My decision in no way reflects a lack of appreciation for the partnership we have with this team. We very much value this partnership and will continue to rely on their collective knowledge and expertise to identify long-term solutions to reduce fishery/harbor porpoise interactions. Our goal, like that of the team, is to protect harbor porpoise, and this action helps accomplish that goal.

I want to express my appreciation to the members of the Northeast Seafood Coalition for their offer to do more to help reduce harbor porpoise entanglements during October and November. It is critical that gillnet fishermen use the appropriate number of pingers (acoustic deterrent devices developed by fishermen) and ensure that they are properly working in all required areas. Proper pinger use is especially important in the Massachusetts Bay and Stellwagen Bank Management Areas beginning October 1 (a month earlier than otherwise required).

By using pingers effectively in the past, fishermen were able to reduce harbor porpoise entanglements from a high of nearly 1500 animals per year to 310 animals per year. We need that same amount of focused attention to reduce harbor porpoise entanglements now.

Working together, we can protect harbor porpoise and keep fishermen on the water.

John K. Bullard, NOAA Fisheries Northeast Regional Administrator

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 229

RIN 0648-XC099

Harbor Porpoise Take Reduction Plan; Coastal Gulf of Maine
Closure Area Established with a Temporary Shift of Its Effective
Date

AGENCY: National Marine Fisheries Service (NMFS), National
Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Establishment of the Coastal Gulf of Maine Closure Area;
temporary shift of its effective date.

SUMMARY: Through this notice, NOAA's National Marine Fisheries
Service (NMFS) announces the establishment of the Coastal Gulf
of Maine Closure Area under the Harbor Porpoise Take Reduction
Plan (Plan), and temporarily shifts the effective date of year 1
of its implementation from October 1, 2012, to February 1, 2013.
Recent information suggests that harbor porpoise bycatch is
higher in February and March than in October and November since
the implementation of sectors in May 2010, warranting a
temporary shift of the closure in year 1 to a time period that
would provide greater conservation benefit to harbor porpoises
and allow time for more complete consideration of updated
information on harbor porpoise bycatch, harbor porpoise

abundance, and fishing effort by the Harbor Porpoise Take Reduction Team (Team). As such, this area will be closed to gillnet fishing in February and March of 2013 rather than October and November of 2012.

DATES: Year 1 effective February 1, 2013; Year 2 and beyond effective October 1, 2013.

FOR FURTHER INFORMATION CONTACT: Kate Swails, NMFS, Northeast Region, 978-282-8481, kate.swails@noaa.gov; or Kristy Long, NMFS, Office of Protected Resources, 301-427-8402, kristy.long@noaa.gov.

SUPPLEMENTARY INFORMATION:

Background

The Harbor Porpoise Take Reduction Plan (Plan) was implemented in late 1998 pursuant to section 118(f) of the Marine Mammal Protection Act (MMPA) to reduce the level of serious injury and mortality of the Gulf of Maine/Bay of Fundy (GOM/BOF) stock of harbor porpoises (63 FR 66464, December 2, 1998). NMFS amended the Plan in 2010 (75 FR 7383, February 19, 2010) to address increased mortalities of harbor porpoises in New England and Mid-Atlantic commercial gillnet fisheries due to non-compliance with the Plan requirements and observed interactions occurring outside of existing management areas.

The 2010 amendments, based largely on consensus recommendations from the Team, included the expansion of

seasonal and temporal requirements within the Plan's management areas, the incorporation of additional management areas, and the creation of three closure areas off the coast of New England that would prohibit the use of gillnet gear if certain levels of harbor porpoise bycatch are exceeded (consequence closure area strategy).

For New England, the 2010 amendments to the Plan implemented a "consequence" closure strategy, which would close specific areas to gillnet gear during certain times of the year if observed average bycatch rates exceed specified target bycatch rates over the course of two consecutive management seasons. If observed bycatch rates exceeded the target rates, the following three areas would become closed: the Coastal Gulf of Maine, Eastern Cape Cod, and Cape Cod South Expansion Consequence Closure Areas. This measure was intended to provide an incentive for the gillnet industry to comply with pinger requirements in areas with historically high harbor porpoise bycatch levels resulting from relatively low levels of compliance. The consequence closures, if implemented, would further reduce harbor porpoise mortalities due to the times and areas chosen for their implementation.

The Coastal Gulf of Maine Consequence Closure would be triggered if the observed average bycatch rates of harbor porpoises in the Mid-Coast, Stellwagen Bank, and Massachusetts

Bay Management Areas (combined) exceed the target bycatch rate of 0.031 harbor porpoise takes/metric tons of fish landed (takes/mtons) (1 harbor porpoise taken per 71,117 pounds of fish landed) after two consecutive management seasons. If triggered, the use of gillnet gear would be prohibited during the months of October and November, which historically have been the months with the highest amount of observed harbor porpoise bycatch. When this area is not closed, the seasonal requirements of the three overlapping management areas, including the March gillnet closure in the Massachusetts Bay Management Area, would remain in effect.

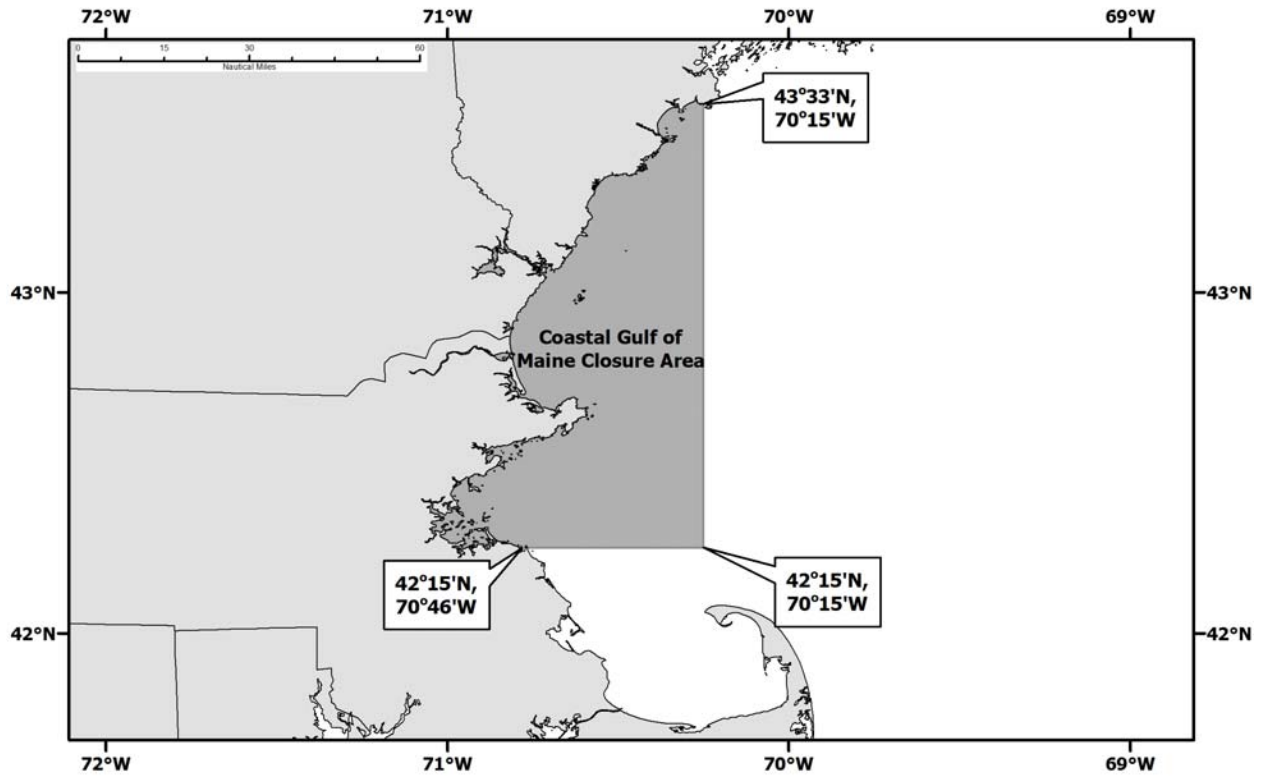
The Cape Cod South Expansion and Eastern Cape Cod Consequence Closures would be triggered if the observed average bycatch rate of harbor porpoises in the Southern New England Management Area exceeded the target bycatch rate of 0.023 takes/mtons (1 harbor porpoise taken per 95,853 pounds of fish landed) after two consecutive management seasons. If triggered, both areas would prohibit the use of gillnet gear annually from February 1 through April 30. When the consequence closure areas are not closed, the seasonal pinger requirements of the overlapping Southern New England Management Area would remain in effect.

Consequence closure area monitoring began with the start of first full management season after implementation of the 2010

amendments. The first monitoring season occurred from September 15, 2010 through May 31, 2011, and the second occurred from September 15, 2011 through May 31, 2012.

The two-year average observed harbor porpoise bycatch rate for the areas associated with the Coastal Gulf of Maine Consequence Closure Area is 0.057 takes/mtons (Orphanides, 2012). This is above the target bycatch rate (0.031 takes/mtons), triggering the implementation of the Coastal Gulf of Maine Closure Area (Figure 1).

Figure 1. Coastal Gulf of Maine Closure Area.



The two-year average observed harbor porpoise bycatch rate in the Southern New England Management Area is 0.020 takes/mtons (Orphanides, 2012), indicating that the two-year average does not exceed the target bycatch rate (0.023 takes/mtons).

Temporary Shift of the Coastal Gulf of Maine Closure Area Effective Date

In April 2012, NMFS sent letters to gillnet fishermen notifying them that NMFS planned to implement the Coastal Gulf of Maine Closure Area beginning October 1, 2012. Following this notification, in August 2012, NMFS received a letter from a fishing industry representative requesting that the agency review harbor porpoise bycatch and fishing effort information in the coastal Gulf of Maine area after the 2010 implementation of the amendments to the Plan, and New England Multispecies Fishery Management Plan Amendment 16, which implemented sector management and greatly modified the way New England groundfish fishermen could fish. The letter specifically requested that the timing of the closure be shifted from October and November to mid-February through March, and that the area be modified to be slightly smaller. This request highlighted a conservation benefit to harbor porpoises that would occur by shifting the timing, as well as an economic benefit for the fishing industry by allowing them to fish in the area during October and November. In considering this request, NMFS examined available

harbor porpoise bycatch and fishing information from 2010 through 2012. Within the boundaries of the Coastal Gulf of Maine Closure Area, harbor porpoise bycatch data indicated that a higher number of observed takes occurred during the spring, particularly in February and March, than in the fall (October and November), equating to a higher estimated total bycatch in the spring. Additionally, the bycatch rate during the spring was higher than in the fall.

Since the implementation of groundfish sectors in May 2010, it is possible that fishing effort distribution has shifted, thus affecting the distribution and timing of harbor porpoise bycatch. Alternatively, this change may reflect a shift in harbor porpoise distribution. However, this information has not yet been fully analyzed.

According to 50 CFR 229.33(f)(2), the Assistant Administrator for Fisheries may revise the requirements of the Plan through notification published in the Federal Register if NMFS determines that the boundaries or timing of a closed area is inappropriate. After consideration of this recent information, NMFS will temporarily shift the implementation of year 1 of the Coastal Gulf of Maine Closure Area from October 1, 2012 through November 30, 2012, to February 1, 2013 through March 31, 2013. This temporary shift will be for year 1 only, and will include the entire Coastal Gulf of Maine Closure Area

as identified in the regulations for the full two-month time period. This temporary shift of the closure will provide greater conservation benefits to harbor porpoises. During October, the Team will convene to consider data generated since the last Team meeting in late 2007. New information includes: new harbor porpoise abundance estimates, the most recent harbor porpoise bycatch information that indicates that harbor porpoise bycatch is exceeding allowable levels under the MMPA, and fishing effort and distribution information within the consequence closure area boundaries as well as throughout the entire range of the Plan. The Team will also assess how the implementation of groundfish sectors has affected gillnet effort and distribution and any related effects on harbor porpoise bycatch. This information will allow the Team to develop a comprehensive management strategy to further reduce the bycatch of harbor porpoises to acceptable levels under the MMPA. After year 1, the closure area timing will revert to October and November, pending the implementation of revised conservation measures resulting from the Team's deliberations this fall.

Despite the shift in the timing of the Coastal Gulf of Maine Closure to February and March of 2013, NMFS stresses the importance of fully complying with the Plan's pinger requirements (i.e., proper number of fully functional pingers present on each net string) to reduce harbor porpoise bycatch.

Pingers are still required on gillnet fishing gear in the Mid-Coast Management Area from September 15 through May 31 and the Massachusetts Bay and Stellwagen Bank Management Areas from November 1 through May 31. Additionally, the entire Massachusetts Bay Management Area is closed during March.

References

Orphanides C.D. 2012. New England harbor porpoise bycatch rates during 2010-2012 associated with Consequence Closure Areas. US Dept. of Commerce, Northeast Fisheries Science Center Reference Doc 12-19; 15 pp.

Dated: September 27, 2012

Samuel D. Rauch III,
Deputy Assistant Administrator for Regulatory Programs,
performing the functions and duties of the,
Assistant Administrator for Fisheries,
National Marine Fisheries Service.

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