



Mid-Atlantic Fishery Management Council

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Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: May 8, 2013
To: Dr. Chris Moore, Executive Director
From: Jason Didden *JD*
Subject: 2013 MSB Fishery Performance Reports for 2014 Specifications

2013 Mackerel-Squid-Butterfish (MSB) Advisory Panel (AP)
Fishery Performance Reports (FPRs) for 2014 Specifications

The Mackerel-Squid-Butterfish (MSB) Advisory Panel (AP) met April 17, 2013 to develop the Fishery Performance Reports (FPRs) below. These FRPs do not represent a consensus but rather a summary of the key perspectives and ideas that were raised at the meeting.

The meeting was facilitated by Jason Didden, the MSB Fishery Management Plan (FMP) plan coordinator. Katie Richardson of NMFS's Northeast Regional Office and Dave Secor (a Member of the Council's Scientific and Statistical Committee) also attended the meeting. Several advisors had to cancel at the last minute - the advisors who were in attendance were:

Axelsson, Lars
Cevoli, Kristen
Kaelin, Jeff
Lackner, Hank
Monsen, Geir
Moore, Peter

The charge to the AP was to provide input on factors that have influenced catch levels over time as well as any other observations and ideas that could prove useful to the SSC and/or Council as catch levels and specifications for 2014 are considered. For organizational purposes, the summary is broken down by species and several thematic categories, which begin on the following page. Some general points were also raised by AP members, as noted immediately below. Like the fishery specific summaries, these do not necessarily reflect a consensus.

-Given the potential implications of ecosystem-based management for mackerel-squid-butterfish management, adding expertise to the SSC in the form of 1-2 additional high-level practitioners of ecosystem modeling would likely be warranted. Sarah Gaichas was named by one AP member as a potential candidate but not all AP members were familiar with her.

-The AP appreciated the Biological Updates provided by the NMFS Northeast Fisheries Science Center (NEFSC) as a concise summary of what is known (or not known) about the status of each of the species.

-Dogfish (spiny), given their prevalence, could be severely impacting MSB and other species, in terms of abundance or as an ecological barrier (e.g. maybe mackerel or squid won't go into areas with high dogfish concentrations, which means pretty much everywhere). As dogfish have come back it seems like everything else has gone down and this issue should be an important component of ecosystem management. Dogfish also have made fishing for MSB species difficult just because of continually loading the nets with dogfish.

-Consumption of forage stocks by marine mammals likely dwarfs mortality from fishing.

-The AP reviewed the potential for a gear requirement change related to net stowage requirements. It had no immediate reaction and will look for additional information on the topic during the MSB Monitoring Committee discussion.

Mackerel

The key points made (not necessarily consensus positions) at the 2013 AP Fishery Performance Report (FPR) meeting were:

Market Issues

-Fuel prices discourage searching but mackerel prices are sufficient to stimulate directed activity if fish are available. While effort was high initially in 2012 and 2013, a variety of factors (especially fuel prices) contributed to a reduction in searching for and exploration of potentially fishable areas.

Environmental Issues

-Availability is the primary driver for catches, and availability is likely highly variable and highly sensitive to external environmental factors, making catch a poor indicator of stock status.

-Both availability and size of fish have been low in recent years, both offshore and inshore. The size issue appears to apply to other forage species like Atlantic Herring and *Illex*, possibly due to warming waters - see Ohlberger 2013, Kingsolver & Huey 2008, Conover et. al. 2002, Forster et. al. 2012).

-There is a lack of mature mackerel. Some of the advisors have provided size information to the NEFSC. 1999/2000 seemed to be a turning point, with small mackerel dominating catches since.

-Ecological needs in terms of mackerel as forage should be factored in explicitly by the SSC when setting ABCs.

-The survey appears to have no connection to landings. More science needs to be conducted to figure out what is really going on with mackerel, including communicating with Iceland about mackerel's recent abundance there.

-Based on the size of mackerel seen in Canada (larger) and U.S. (smaller) and presumed migration pattern (Canada to U.S.), it appears that the Canadian and U.S. stocks are different (fish don't shrink).

-Ctenophore research and the Labrador Current should be examined as to clues to where the mackerel are or have gone to.

Management Issues & Management Induced Effort Shifts

-The February 2012 closure of Atlantic herring in southern New England in 2012 reduced the ability of participants to target mackerel because of mixing of these two species. There were some vessels that would have continued to fish/search for mackerel but what the end result of that searching would have been can never be known.

-The same was true in 2013 but to a lesser degree as Atlantic Herring closed in April 2013. Better information on the interaction between Atlantic herring fishing and Atlantic mackerel fishing would allow further analysis of this issue and continued/additional coordination between these fisheries is important.

Other Fishing Behavior Issues

-In recent years much of the mackerel catch has been retained incidental catch from herring fishing.

-With current fuel prices, high catches of mackerel will only occur if fish are abundant. Economics will self-regulate this fishery and the fishery has not impacted the mackerel stock.

Other Issues for Council/SSC Consideration as Appropriate

-Despite reluctance by the Canadians, joint research should be pushed and U.S. research should proceed where appropriate relative to the 2010 TRAC recommendations (especially on the influence of environmental factors and on mackerel's stock structure).

-There is a concern that once a quota is reduced it will never be restored given the current state of mackerel science. Recent catches of mackerel should not be used as an indicator of what the catch should be next year.

-A 20,000 pound trip limit serves as a sufficiently effective deterrent to most directed fishing should mackerel close (due to mackerel or a bycatch cap).

-In terms of buffering against U.S. ACL overages, a 15% buffer seems excessive given the monitoring that occurs in the mackerel fishery and the apparently low level of mackerel discarding.

-Specifications should consider allowing a roll-over of unused quota in a similar fashion as occurs with Atlantic Herring.

Illex Squid

The key points made (not necessarily consensus positions) at the 2013 AP Fishery Performance Report (FPR) meeting were:

Market Issues

-Price and demand are mostly dependent on S. Atlantic landings, which drive world trade prices and/or demand for US *Illex*. Availability has to be sufficient to overcome any market/fuel price issues to drive interest in fishing for *Illex* for most vessels.

Environmental Issues

-Availability changes from year to year and also very quickly within a year (waves of squid “come up onto the bank” in an unpredictable fashion). Recent availability has been relatively high. Real-time assessment would be optimal.

-Understanding migration is key to understanding *Illex*, and we don't fully understand the migration behavior.

-Ecological needs in terms of *Illex* as forage should be factored in explicitly by the SSC when ABCs are recommended.

Management Issues & Management Induced Effort Shifts

NA

Other Fishing Behavior Issues

-For refrigerated sea water vessels to participate, they need high densities to fish because they have to return to the dock within two days of starting to put *Illex* in the tank due to spoilage issues.

Other Issues for Council/SSC Consideration as Appropriate

-Research should continue into how to determine *Illex* productivity as current management is not sensitive to actual *Illex* productivity. The fishing community should be an integral part of this effort, which should proceed in a very methodical fashion.

-“If it ain't broke don't fix it.” Proceed carefully before you make any changes.

-Summer & fall longfin closures can lead to discarding of longfin in the *Illex* fishery. A higher incidental limit for *Illex* vessels during longfin closures or a more gradual slowing of longfin fishing could avoid regulatory longfin discarding.

-A new control date for *Illex* makes sense given potential effort and capacity issues in that fishery. Permit holder letters should be sent out when the control date is published. Entry of latent effort could disrupt smooth operation of the fishery.

Longfin Squid

The key points made (not necessarily consensus positions) at the 2013 AP Fishery Performance Report (FPR) meeting were:

Market Issues

-Recent ex-vessel prices are sufficient to drive increased effort (recent prices have been quite high) but fuel prices are probably constraining search effort to some degree. There is a disincentive to engage in hit-or-miss exploratory fishing with the current fuel bills.

Environmental Issues

-Longfin squid has variable productivity and availability both within a year and between years and between inshore and offshore. Recent warm winter water temperatures have resulted in less schooling/more spreading of longfin squid, making fishing less feasible/profitable during some parts of the year.

-Effort was very high in the summer of 2012 because of the high squid availability both inshore and offshore.

-Ecological needs in terms of longfin squid as forage should be factored in explicitly by the SSC when ABCs are recommended.

-There were more extreme northern reports of longfin availability in 2012 (Maine and Nova Scotia).

Management Issues & Management Induced Effort Shifts

-Scup, Tilefish, and Fixed/Mobile GRAs have made *Longfin squid* fishing more difficult/less profitable, likely leading to somewhat less effort overall.

-The butterfish cap has created a disincentive to even bother with longfin squid. There is more discussion about where not to fish because of butterfish than where to fish because of longfin squid. The observer notification requirement (even 48 hours) limits opportunistic fishing if a trip has not been notified for.

-The mistaken April 2012 closure may have significantly impacted 2012 Trimester 1 landings because landings were on the upswing immediately prior to the closure. NMFS needs to avoid a repeat of this situation.

-2012 landings would have been higher if not for the Trimester 2 closures.

Other Fishing Behavior Issues

-Some vessels have been focusing on other species (other quotas have been increasing - e.g. summer flounder & scallops; some vessels were retrofitted for pelagic fishing). Several recently active participants have just left the fishery and those vessels are unlikely to return.

Other Issues for Council/SSC Consideration as Appropriate

- Research should continue into how to determine longfin productivity as current management is not sensitive to actual longfin productivity. The fishing community should be an integral part of this effort, which should proceed in a very methodical fashion.
- The lack of proper NMFS notification for the 2012 Trimester 2 longfin closure needs to be avoided in the future.
- There are times of substantial local directed recreational effort and catch, which may not be reflective of overall abundance and recreational catch is likely very small compared to the overall quota.
- A new control date for Longfin makes sense given potential effort and capacity issues in that fishery. Permit holder letters should be sent out when the control date is published. Entry of latent effort could disrupt smooth operation of the fishery.
- Mesh requirements should not change from current specifications - increases will allow more squid to escape and if they get nicked by the net, which is likely, they will just die, probably the same for many small fish. The 2.125" mesh is practicable. Mesh that allows fish to escape will allow too many squid to escape for mesh measures to be practicable for bycatch reduction. Many vessels are already using 2.125" in the summer. Many discards are because of regulations/permits that prevent retention of particular species.
- For additional roll-overs between trimesters, Council should include an option that allows any Trimester (including Trimester 1) to gain if it nears its quota. Allowing for judgment calls to ensure flexibility would be best, but a reserve option may add flexibility. Consider having any additional quota be fished for in a slower manner.
- Taking the results of the squid workshop out into a few ports for additional input is a good idea.

Butterfish

The key points made (not necessarily consensus positions) at the 2013 AP Fishery Performance Report (FPR) meeting were:

Market Issues

- Low butterfish availability/abundance resulted in low landings in the 1990s and it was very difficult to re-establish a market given the low quotas. It might take several years to re-establish export markets, but there are some indications that demand may be higher than anticipated.
- It is also possible to redevelop the fresh market but that will take more time - boats have been increasing fresh butterfish production slowly so as to not crash the price.

Environmental Issues

- This winter/early spring (2013) was very windy offshore, which hampered fishing effort and the effect of that effort (fish seemed to be dispersed)
- Abundance has been relatively high in the last few years compared to the early 2000s, both inshore and offshore.
- Since there have been periods of depressed abundance, precaution is warranted given butterfish's important role in the ecosystem as part of the forage base.
- Ecological needs in terms of butterfish as forage should be factored in explicitly by the SSC when ABCs are recommended. Management needs to account for the high consumption of butterfish by predators in a precautionary fashion.

Management Issues & Management Induced Effort Shifts

- Regulations (quotas and trip limits) were the only thing holding back higher landings in 2012.
- The directed butterfish fishery did not begin until a few weeks into 2013.

Other Fishing Behavior Issues

- When they could get out in 2013, some vessels found lots of butterfish but smaller butterfish and stopped fishing for them because they didn't want to discard lots of small butterfish to get a marketable quantity of decent sized fish.
- Excessive dogfish catches also discouraged searching for butterfish, same as longfin squid.
- For export, December-March are the prime butterfish fishing months in terms of fish quality (fat and feed issues).

Other Issues for Council/SSC Consideration as Appropriate

- For short lived, tightly schooling fish you need a targeted & dedicated survey - this is how the rest of the world assesses these kinds of stocks.
- Some but not all advisors think butterfish should qualify for an exemption to ACLs.
- Looking at only the Bigelow's area sample misses a substantial amount of butterfish habitat.
- The need for a cap appears questionable given the current butterfish ABC.