

2016 Mackerel-Squid-Butterfish (MSB) Advisory Panel (AP) Fishery Performance Reports (FPRs)

The Mackerel-Squid-Butterfish (MSB) Advisory Panel (AP) met May 2, 2016 to develop the Fishery Performance Reports (FPRs) below. These FRPs do not represent a consensus but rather a summary of the perspectives and ideas that were raised at the meeting.

The meeting was conducted via internet webinar and facilitated by Jason Didden, the MSB Fishery Management Plan (FMP) coordinator. The MSB advisors who participated were:

Katie Almeida
Joseph Gordon
Greg DiDomenico

Peter Kaizer
Peter Moore
Pam Lyons Gromen

Other attendees included:

Tom Miller
Howard King
John Boreman
Scott Curatolo-Wagemann
Meghan Lapp

Doug Lipton
Carly Bari
Purcie Bennett-Nickerson
Erica Fuller

The fishery performance reports' primary purpose is to contextualize catch histories for the Scientific and Statistical Committee (SSC) because of the potential importance of catch histories for considering Acceptable Biological Catches (ABCs) in cases of fisheries with high levels of assessment uncertainty. The goal is to record information about fishery conditions and characteristics that may influence catches. A series of trigger questions was posed to the AP. The questions are based on the discussion and results of the 2011 fishery performance meeting that focused on 2010 and prior catches. The primary intent of the questions is to generate discussion of direct observations of knowledgeable individuals involved in the fisheries in some fashion, especially as related to factors that may have influenced catches. The trigger questions were:

1. Are you aware of market issues that influenced MSB catches? For example: Fish prices, fuel prices, overall economy, etc...
2. Are you aware of environmental/ecological issues that influenced MSB catches? For example: Weather, sea temperature, climate, etc...
3. Are you aware of management issues that influenced MSB catches? For example: management induced effort shifts, management prohibiting directed fishing, etc...
4. Are you aware of other fishing behavior issues that influenced MSB catches? For example: refrigerated sea water (RSW) vs. at-sea freezing activity, vessels focusing on other fisheries, etc...
5. What other issues/concerns does the AP wants to highlight? For example: lack of U.S. mackerel allocation, forage concerns, calibration issues, fishery conflicts, regulatory concerns, etc...

The charge to the AP was thus to provide input on factors that may 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 specifications for 2017 and beyond are considered. For organizational purposes, the summary is broken down by species and several thematic categories (per the above trigger questions). Some general points were also raised by AP members, as noted immediately below. Like the fishery-specific summaries, these do not reflect a consensus but rather a summary of the various ideas presented by the AP members.

Many ideas are carried forward from last year. Such items are marked with “***”. Staff noted that some management issues raised by the AP are out of the scope of specifications and/or this call, and that individuals should write to the Council or talk to their Council members to have such issues considered by the Council.

General

-The AP appreciates 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.**

-Spiny Dogfish abundance could be severely impacting MSB and other fisheries, in terms of predation, interference (loading nets), and/or as an ecological barrier (e.g. maybe mackerel or squid won't go into areas with high dogfish concentrations). As dogfish have come back it seems like everything else has gone down and this issue should be an important component of ecosystem management. **

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

-Need to keep looking at consumption issue – try to build connections between fishery management plans.

-Shifting of thermal habitat suitability is likely impacting the distribution and/or productivity of MSB species. This is being looked at for mackerel in preparation for the upcoming mackerel assessment (collaborative research project).

-There is concern that effort has shifted North/inshore – consideration of possible impacts is warranted.

-Regulations impact opportunities for all fisheries – see discussions in species' sections below.

-It would be useful to get discard info as #s of fish, in addition to weight, to better understand impacts.

-The Council should direct the SSC to consider forage needs though a forage-based ABC control rule.

Mackerel

The key points (not consensus positions) were:

Market Issues

- Mackerel prices are sufficient to stimulate directed activity if fish are available. **
- Price is mostly driven by world prices/demand/supply. **

Environmental/Ecological 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. Fishery not even looking much given low availability and other issues (see regulatory issues below). Water was too warm in spring (throughout range).
- Can't catch what's not here - and mackerel that did appear in 2014/2015 were far north. Can't hurt a stock that's not here - need to figure out where it is (ctenophore research, Labrador Current, etc.). The fish are not gone, just not swimming here.**
- Both availability and the 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 *Illlex*, possibly due to warming waters - see Ohlberger 2013, Kingsolver & Huey 2008, Conover et. al. 2002, Forster et. al. 2012).**
- There's been 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. ** Spawning must be taking place somewhere given age-1s...the question is what happens to them?
- Would be useful to see long-term consumption trends. We don't have knowledge base to set aside fish for ecosystem services at this time.
- The low landings and Canadian assessment should give pause for concern and warrant consideration of a further lowering of the ABC. If a shift north was the primary issue Canadian landings should have remained strong.
- Canadian landings are inshore purse seine, so the animals may be offshore in deep water and not encountered in Canadian fishery.
- 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).**
- If catches that are occurring are concentrated in few times/locations then Council should look at impacts of that catch pattern – are the catches that are still occurring preventing recovery of mackerel (i.e. allowing high-volume fishing on spawning fish). What information is available re: mackerel spawning?
- Would be useful to look at distribution trends over time. i.e. impacts of climate shifts & ecosystem changes. There was little generation of cold water into MAB this winter that would connect GOM to MAB and let mackerel come down. There were also menhaden in colder water recently.

Management Issues & Management Induced Effort Shifts

-Herring management limits mackerel fishing**:

-Annual herring gear closures in Gulf of Maine (1A) limit ability to explore/catch in that area. MWT cannot fish in 1A from Jun 1-Sept 30. Area 1A (Gulf of Maine) also closed November 2-Dec 31 2015.

-Georges Bank Haddock AM closed Georges Bank herring fishing October 22 2015-April 30, 2016.

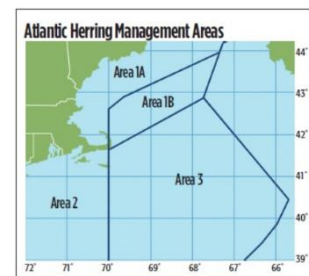
-Other areas open (1B, rest of Area 3, Area 2)

-Had good runs in late 2014/2015 which has been rare.

-Also had an extended run of some mackerel in early 2015 to the south (2 cold winters), but they were mixed with menhaden and because of menhaden limits in NJ, boats could not land menhaden, so they couldn't target mackerel (January into April).**

-The observer call-in requirements may limit opportunistic fishing.**

-Need to leave some amount of mackerel quota so that fishery can capitalize on availability when it occurs. 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.**



Other Fishing Behavior Issues

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

-With relatively high fuel prices, high catches of mackerel will only occur if fish are abundant (gas price not as substantial this year/2015). 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).**

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

-There is concern about what exactly an MSE (Management Strategy Evaluation that generated ABC/quota) means and consists of.**

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

-Council should consider increasing the mesh size (or requiring square mesh codends) to allow more fish to get to spawning size/age.

Illex Squid

The key points (not consensus positions) were:

Market Issues

-Price and demand are mostly dependent on S. Atlantic (e.g. Falkland Islands) landings and international market, which drive world trade prices and/or demand for U.S. *Illex*. Availability must be sufficient to overcome any market/fuel price issues to drive interest in fishing for *Illex* for most vessels. Strong dollar may impact price/sales/demand. **

-Demand drives the fishery and participation. Continued weak demand for U.S. *Illex* = limited searching/interest through summer 2015 fishery. Market is looking to be better for summer 2016.

Environmental/Ecological 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). Understanding migration is key to understanding *Illex*, and we don't fully understand the migration behavior. Real-time assessment would be optimal.**

-The recent low landings and decline in indices should give the SSC some pause for concern.**

Management Issues & Management Induced Effort Shifts

Deep-Sea Coral measures may strongly impact ability of vessels in fishery to operate going forward, depending on implementation.**

Other Fishing Behavior Issues

-For refrigerated sea water vessels to participate, they need high densities to fish to drive participation 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. Current management is not sensitive to actual *Illex* productivity or impact of fishery on the stock. 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. The new higher limit in 2014 is better but may not totally solve this problem.**

-Concern was reiterated about re-entry of latent permits. Entry of latent effort could disrupt smooth operation of the fishery.** [Staff noted there is an amendment pending to look at this.]

Longfin Squid

The key points (not consensus positions) were:

Market Issues

-Recent ex-vessel prices are sufficient to drive increased effort if squid are available. Prices the last few years had been decreasing, possible causes could include: lower quality and high quantity of summer squid, stronger dollar, and lower prices for imported cleaned squid, but prices increased in 2015. 2016 prices so far are also very good and fuel prices have been relatively low. The international market will currently take whatever the U.S. can produce so no glut factor exists.

-High effort in summer can cause closures and high landings volume/gluts. Concern by at least one advisor that it is being exacerbated by high capacity.**

Environmental/Ecological Issues

-Longfin squid has variable productivity and availability both within a year and between years and between inshore and offshore.**

-Beginning of 2015 was very windy.** Weather not cited as issue for early 2016.

-Dogfish continue to make some areas unfishable and are a reason why landings can turn off. The restraint on the dogfish fishery correlates with lower squid landings.**

Management Issues & Management Induced Effort Shifts

-Scup, Tilefish, and Fixed/Mobile Gear Restricted Areas (GRAs) have made *Longfin squid* fishing more difficult/less profitable, likely leading to somewhat less effort overall. Staff noted there is an ongoing action to consider modifications to the scup GRAs.**

-The observer notification requirement (even 48 hours) limits opportunistic fishing if a trip has not been notified, leading to lost revenues/fishing opportunities – this is especially critical for narrow winter weather windows.** (As of April 26, 2016 the notification is no longer in effect)

-The mistaken April 2012 closure may have substantially impacted 2012 Trimester 1 landings because landings were on the upswing immediately prior to the closure.**

-Annual landings would have been higher in some recent years if not for the Trimester 2 closures. Any seasonal closures likely depress annual landings (there were no seasonal closures in 2013/2015 and 3 weeks in August 2014).**

-The 2 1/8" mesh requirement may be harming productivity and causing the relatively low landings in recent years (landings have been lower since 2007). Squid that go through 2 1/8" are marketable and likely have high mortality. 2 1/8" may appear practicable for fishery but may be increasing squid mortality and is unlikely to allow substantial escapement of other fish. Should be examined in detail. Staff later researched that the mesh increase was September 13, 2010. Multiple AP members questioned the value of the 2 1/8" mesh. Some fishery participants would prefer 1 7/8" year round. **

-2 1/8" mesh should be extended to the summer trimester 2 fishery. Use of strengtheners reduces effective mesh sizes – consider eliminating the use of strengtheners. Consider impact of strengtheners on retention/bycatch and the use of square-mesh.

-Need to find out if landing more squid (normal trimester plus Trimester 1 roll-over) in summer is negatively impacting fall/winter productivity.** Staff notes that this issue is being evaluated in the upcoming squid amendment.

-There was concern about what the new VMS reporting requirements are being used for. ** Staff notes they have not been used to date but could be used for quota monitoring as a quota nears its limit.

Other Fishing Behavior Issues

-Some vessels have been focusing on other species (other quotas increased - e.g. scallops; some vessels were retrofitted for pelagic fishing). Several participants have 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. Current management is not sensitive to actual longfin productivity or impact of fishery on the stock. 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.**

-Concern was reiterated about reentry of latent permits. Entry of latent effort could disrupt smooth operation of the fishery.** [Staff noted there is an amendment pending to look at this.]

-The issue of additional flexibility between trimesters was raised again, and staff noted that this is an issue being considered in the squid amendment.** Related concerns that were voiced included:

- Consider squid capacity issues before considering additional trimester issues.**

- Need to consider fairness and access issues. For example, there is a smaller group of vessels that can access state waters in NY.**

- Want quota caught, but do it right way – higher effort in spawning areas not good for fishery.**

- Consider near-shore buffer area, especially for rolled-over squid.

-There are times of substantial local directed recreational effort and catch, which may not be reflective of overall abundance. Recreational catch is likely very small compared to the overall quota.**

-Sense that recreational fishery is increasing. See more squid tackle in stores. There is also a traveling recreational contingent that uses social media/internet to spread the word about varying local availability. 2014 spring fishery in MA drove towns to enact regulations to address high participation. May be approaching a level that needs to be accounted for.**

Butterfish

The key points (not consensus positions) were:

Market Issues

-Low butterfish availability/abundance resulted in low landings in the 1990s and it has been very difficult to re-establish a market. It might take several years to re-establish export markets, but there are some indications that demand may be higher than anticipated. Traditional export food markets want fish caught in December-March (fat/roe/feed issues).**

-Boats have been increasing fresh butterfish production relatively slowly so as to not crash the price. Fresh market has been absorbing surprising quantity of fish without price dropping.**

-Early 2015 sizes were very good and the fish are of high quality. **

-It is too early to determine how the markets will respond to U.S. butterfish in the long run, but participants remain cautiously optimistic.**

-2016 fishery so far is largely incidental – lots of small butterfish, absence of larger fish. Overall mentality is still to avoid butterfish - focus has been on longfin squid given good 2016 longfin squid fishery so far.

Environmental/Ecological Issues

-Early 2015 had very poor fishing weather. Weather not cited as issue for early 2016.

-Abundance has been relatively high in the last few years compared to the early 2000s, both inshore and offshore. **

-Precaution is warranted given butterfish's important role in the ecosystem as part of the forage base and given butterfish catches have been very low compared to recent projection results.** [Note: ABC is already connected to butterfish's forage role through the SSC's ABC approach.]

-There remains some concern about the age structure of butterfish.** What is age range of recent butterfish catches? Staff will ask center staff when next round of aging will be done.

Management Issues & Management Induced Effort Shifts

-Mesh requirement is holding landings back and causing regulatory discards. Need an analysis of any discards to determine cause – regulatory discarding may be a primary cause of discarding. The 2,500 pound trip limit for using <3-inch mesh was causing regulatory discarding. If you are out squid fishing and happen to come across some butterfish, having to discard does not make any sense. Focused butterfish fishing will probably use 3-inch mesh anyway. Less than 3-inch mesh is probably targeting something else and hitting butterfish incidentally - why not keep? Note: Effective May 26, 2016, moratorium permits can retain up to 5,000 pounds butterfish with under 3" mesh.

Other Fishing Behavior Issues

-2014 saw moderate catch increases as predicted by AP relative to 2013.**

-Somewhat lower 2015 catch not surprising given few participants and developmental phase of fishery.

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 discard cap on the longfin squid fishery appears questionable given the current butterfish ABC.**

-The ability to balance quotas (and increase butterfish landings if a substantial part of the discard cap has not been used) late in the year is important since good quality butterfish start being available in December. (Framework 8 allows this and it was used in 2014)**

-Cornell is examining mesh issues – preliminary data suggest 8cm square mesh and 8cm T-90 mesh could be productive for eliminating small butterfish. More information should be available in final report.**

-Squid trawl network still providing information on butterfish availability – negative reports are also very important for operation of the avoidance network.**