

2014 Squid-Butterfish (MSB) Advisory Panel (AP)

Fishery Performance Reports (FPRs) for

2015-2017 Specifications

The Mackerel-Squid-Butterfish (MSB) Advisory Panel (AP) met April 14, 2014 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 conducted via internet webinar and facilitated by Jason Didden, the MSB Fishery Management Plan (FMP) plan coordinator. The MSB advisors who participated were:

Patrick Paquette
Robert Ruhle
Kristen Cevoli
Dave Ellenton

Paul Eidman
Jeff Reichle
Eric Reid
Sam Martin

Other participants included:

Bonnie McCay (SSC)
Aja Szumylo (NMFS)
Olaf Jensen (SSC)
Dave Secor (SSC)
Doug Vaughan (SSC)
Mike Wilberg (SSC)

Brian Rothschild (SSC)
John Boreman (SSC Chair)
Jeff Kaelin (Council Member, NJ)
Laurie Nolan (Council Member, NY)
Tom Rudolph (Public)

The primary purpose of the fishery performance reports is to contextualize catch histories for the Scientific and Statistical Committee (SSC) because of the potential importance of catch histories for determining Acceptable Biological Catches (ABCs) in cases of fisheries with high levels of assessment uncertainty. The goal is to compare and contrast the most recent year's conditions and fisheries characteristics with previous years. 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 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 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 2015-2017 are considered. For organizational purposes, the summary is broken down by species and several thematic categories (per the above trigger questions), 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.

General

- 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.

- Staff discussed that a gear requirement change related to net stowage requirement is pending and that AP members should be alert to proposed changes.

- Staff noted that some management issues raised by the AP are out of the scope of specifications and/or this call, and that they should write to the Council or talk to their Council members to have such issues considered by the Council.

Mackerel

The key points made (not necessarily consensus positions) at the 2014 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 2012-2014, a variety of factors (especially fuel prices) contributed to a reduction in searching for and exploration of potentially fishable areas.

-Price is mostly driven by world prices and was down in 2013 as world supply was high.

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.

-Can't catch what's not here - and mackerel that did appear in 2014 were far north. Can't hurt a stock that's not here - need to figure out where it is (ctenophore research, Labrador Current, etc.)

-2013 and 2012 for recreational catch were very similar. Small fish were prevalent, were present later (into August), and targeted mostly for bait (Stellwagen Bank into state waters). It seems like the last 5 years constitute a new baseline in terms of mackerel availability recreationally. Before that there was a strong spring showing and then mackerel departed in early July (headed north as bluefish arrived).

-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 *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 low landings and Canadian assessment should give pause for concern and warrant consideration of a lower ABC.

-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).

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.
- No early 2014 herring closures occurred.
- Going forward, the new observer call-in requirements may limit opportunistic fishing.

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.
- 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 2014 AP Fishery Performance Report (FPR) meeting were:

Market Issues

-Price and demand are mostly dependent on S. Atlantic (e.g. Falkland Islands) 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.

-Availability was lower, and in 2013 U.S. processors had some extra inventory - combined with small squid and low prices on small squid, this reduced the incentive to fish for *Illex*.

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 was relatively high before 2013, 2013 was lower. 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. The recent low landings and decline in indices should give the SSC some pause for concern.

Management Issues & Management Induced Effort Shifts

NA

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 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. The new higher limit in 2014 is better but may not solve this problem.

-Concern was reiterated about re-entry of latent permits. Entry of latent effort could disrupt smooth operation of the fishery.

Longfin Squid

The key points made (not necessarily consensus positions) at the 2014 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 in some years.

-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).

-Availability was very low in the beginning of 2013 but higher later.

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 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. Both of these lead to lost revenues/fishing opportunities.

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

-2012 landings would have been higher if not for the Trimester 2 closures. Any seasonal closures likely depress annual landings (there were no seasonal closures in 2013).

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 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. Recreational catch is likely very small compared to the overall quota.

-Concern was reiterated about reentry of latent permits. 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.

-The issue of additional flexibility between trimesters was raised again, and staff suggested that interested parties should request the Council examine this issue if it is a priority.

Butterfish

The key points made (not necessarily consensus positions) at the 2014 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.
- Traditional export food markets want fish caught in December-March (fat/roe/feed issues). The fishery opened mid-Jan in 2013 and it took a while to get back to/used to butterfish fishing (e.g. searching).
- Early 2014 sizes are very good and the fish are of high quality (see 2014 landings).
- It is too early to determine how the markets will respond to U.S. butterfish, but participants are cautiously optimistic.
- There were just a few participants in early 2014 because the ex-vessel price was uncertain. Vessels have to search and that leads to uncertainty of successful catching, which combined with price uncertainty and fuel prices discourages participation.

Environmental Issues

- Winter/early spring of 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.
- 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. 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. There also remains some concern about the age structure of butterfish.

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 (missing December 2012 and early January 2013 contributed to a slow resumption of directed activity). Fish that were found at that point were too small and/or not of optimal quality, and other fishing options were available. Exporters need high quality fish to re-enter markets.

Other Fishing Behavior Issues

- When they could get out in early 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 in order to get a marketable quantity of acceptably sized fish.
- 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 discard cap on the longfin squid 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) in December is important since good quality butterfish start being available in December. (Framework 8, now implemented, will allow this)