



Squid and Butterfish Fishery Performance Reports April 2021

The Mid-Atlantic Fishery Management Council's (Council) Mackerel-Squid-Butterfish (MSB) Advisory Panel (AP) met via webinar on April 20, 2021 to review the Fishery Information Documents and develop the following Fishery Performance Reports (mackerel will be dealt with later in the year). The primary purpose of these reports is to contextualize catch histories for the Scientific and Statistical Committee (SSC) by providing information about fishing effort, market trends, environmental changes, and other factors. The trigger questions below were posed to the AP to generate discussion. The AP comments summarized below are not necessarily consensus or majority statements.

Advisory Panel members present: Katie Almeida, Gerry O'Neil, Meghan Lapp, Greg DiDomenico, and Pam Lyons Gromen, Peter Kaizer, and Peter Moore.

Others present: Jason Didden, Paul Rago, Aly Pitts, Peter Hughes, Eric Reid, Mary Sabo, Chuck Adams, and Stephen Pearson.

Trigger questions:

1. What factors have influenced recent catch (markets, environment, regulations, etc.)?
2. Are the current fishery regulations appropriate? How could they be improved?
3. What would you recommend as research priorities?
4. What else is important for the Council to know?

For organizational purposes, the summary is broken down by species. Each species discussion began by reviewing the species' "information document." Some general points were carried over from previous reports, as described immediately below.

1.1 General

Concern was voiced that shifting thermal habitat suitability is impacting the distribution and/or productivity of MSB species, and needs to be taken into account by assessments/management.

There is concern that assessments will be hurt if surveys are limited by wind development.

Concern was voiced about the potential effects of data gaps due to COVID-19.

Tariffs affect prices and profitability, and therefore trade. If a buyer is in China, that buyer may try to negotiate price based on what they know they will have to absorb in tariffs.

1.2 Butterfish

Market/Economic Conditions

2020 butterfish demand was mostly status quo outside of Covid – i.e. slow development. U.S. butterfish competes with other butterfish that are larger, and which are sometimes imported into the U.S. as well, limiting market expansion. There's still limited interest in this fishery by the typical MSB fishery participant, but it's a substantial fishery for some.

Traditional markets disappeared (export to Japan – breakfast) and it's a long-term process to re-establish markets. Domestic fresh markets are limited, though suppliers are working on ways to expand the market.

Environmental Conditions

See point above in general section about shifting thermal habitat.

Management Issues

The Northeast Canyons and Seamounts Marine Monument negatively impacted access to butterfish until mid-2020, especially large butterfish that command the best prices.

Lobster RGAs are a gear-conflict issue for butterfish (and other MSB species).

The AP reviewed preliminary bycatch data in the longfin fishery – in general AP members thought it was worth continuing to explore bycatch issues to minimize any apparent regulatory issues, but there was not strong interest in making quick changes while the research track assessment is ongoing. A standing request for regulation outreach to the fishery was reiterated – GARFO is working on related outreach materials.

Other Issues

Dogfish abundance has been an issue for the directed fishery – at times vessels can't set on butterfish w/o overloading nets with dogfish.

Research Priorities

Integrating state surveys is important for this species in terms of observing recruitment (the current assessment is examining this).

We need to develop more understanding of biomass trends when fishing mortality does not appear to be a driving factor.

There was support voiced for the SSC providing catch advice that continues to incorporate forage concerns (see the 1992 Patterson paper, the butterfish assessment, and previous SSC approaches). It has been noted that the Fmsy proxy used in the assessment explicitly accounts for the forage role of butterfish.

We need a way to look at forage species holistically in terms of species compositions and abundances of other forage species at the same time. The butterfish biomass decline is concerning especially in context of other forage species (e.g. Atlantic herring and mackerel that are also declining).

1.3 Longfin Squid

Market/Economic Conditions

COVID-19 had drastic impacts on 2020 longfin demand. Retail trade has provided an outlet for some longfin squid products. COVID-19 will continue to increase market uncertainties for the foreseeable future. Ex-Vessel prices dropped 40%-50% from early 2020 to April 2020.

Supply/distribution issues (and increasing shipping costs) are also affecting all seafood markets. EU regulations and market preferences (squid size sorting requirements) also limit ability to re-shuffle squid products into Europe.

Environmental Conditions

See point above in general section about shifting thermal habitat.

Management Issues

Area/gear limitations negatively affect fishing/landings. Scup, Tilefish, and Fixed/Mobile Gear Restricted Areas (GRAs) have made longfin squid fishing more difficult. Large mesh requirements on George's Bank also restrict targeting of longfin squid in an areas where fishermen have been seeing signs of longfin squid. Until mid-2020, the Northeast Canyons and Seamounts Marine Monument may have also negatively impacted access to areas where longfin squid could have been caught.

Other Issues

Windfarm development continues to be a major concern for the longfin squid fishery given expanding potential overlap between potential wind farm areas and squid fishery areas. Concerns involve **both** fleet displacement and effects on squid mortality/behavior from installation and/or operation of turbines/facilities.

There was a question about 2020 squid effort/CPUE, but that information is not available.

Research Priorities

Investigate NEFSC survey catchability for longfin.

It needs to be more clearly described how the existing evidence supports two primary cohorts (which happen to align with the surveys).

A squid jigging project through CFRF is underway to explore the feasibility of jigging.

1.4 *Illex* Squid

Introduction:

In general, discussion was muted given the expectation that the ongoing research track assessment will provide better information on *Illex*. Similar issues as last year persist.

Market/Economic Conditions

Demand drives the *Illex* fishery and participation. Price/demand are mostly dependent on the international market, which drives world trade prices and/or demand for U.S. *Illex*. Annual variability and price combine to drive interest in fishing for *Illex*. A strong dollar may also impact demand and effort. Market demand for *Illex* was robust in 2016-2020 with new markets (bait and food). MSC certification helps. World production of Japanese flying squid, Argentine shortfin squid, our *Illex*, and Jumbo flying squid creates supply, affects demand for our *Illex*.

Environmental Conditions

Availability changes quickly even in a year (waves of squid “come up onto the bank”). Quota levels have not hurt the stock and are unnecessarily restricting catches in some years; we need to think out of the box regarding quotas. Understanding migration is key and we don't understand the migration behavior and only access a small portion of the population. Real-time assessment would be optimal to avoid leaving excess *Illex* (and revenues) in the water without a conservation purpose during natural peaks. We need to research ways to take advantage of boom years, including considering the size of squid (taking large squid means harvesting fewer animals). Current management is not sensitive to actual *Illex* productivity or the impact of the fishery. The fishing community should be an integral part of any effort; make changes carefully but don't just get stuck where we are.

It was noted that given *Illex* are growing through the season, early shutdowns mean our picture of *Illex* size is incomplete.

There is interest in learning more about spawning habitat and timing. NEFSC staff had

planned for more collection in 2020 but did not get observers due to COVID. Planned for 2021 depending on observer deployments.

Management Issues

In the future, deep-sea coral closures may impact the ability of vessels to operate depending on where squid are in a given year – this may become an issue especially in slower years that last longer – *Illex* patterns are changing like other fish – they seem to be deeper in recent years.

Reduced herring quotas may increase participation in the *Illex* fishery.

A higher incidental longfin limit for *Illex* vessels during longfin closures or a more gradual slowing of longfin fishing could avoid regulatory longfin discarding. The new (since 2014) higher limit (15,000 pounds for Tier 1 longfin permit, 5,000 pounds for Tier 2 when on an offshore *Illex* trip and having more than 10,000 pounds of *Illex*) may not totally solve this problem. There is also interest in seeing commercial size data included annually for review by the AP.

Advisors noted ongoing Lobster/RGA issues and were interested in a better way to transition gears/area. (the Council tried to engage the ASMFC a number of years ago but there was not much interest). Fixed/mobile gear “gentlemen agreements” are used inshore and may be a solution, but might not be practicable for *Illex* given the patchiness of fish and the amount of gear out in the depth where *Illex* is fished. GARFO did have incidents of lobster gear interactions in 2020.

Jonah crab fixed gear is also an issue – boats are seeing more of this gear and it’s becoming a problem.

Regarding *Illex* trip limits after closure of the directed *Illex* fishery, there was a general sense that changing/increasing might be OK, but would need to be tied to possession of longfin to avoid post-closure directing on *Illex*. There were different perspectives on timing (whether or not to wait until after the *Illex* amendment has been implemented before considering other changes).

Other Issues

For refrigerated sea water vessels to participate, they need high densities to drive participation because they have to return to the dock within two days of starting to put *Illex* onboard due to spoilage issues. The fleet is changing from freezers to RSW, increasing catch rates. 3 boats in last 18 months have been converted from freezers to RSW. Some new mackerel/herring boats (besides the ones that have typically participated in *Illex*) have entered in recent years with more efficient pumping technology, increasing landing rates.

Passing of vessels is getting more difficult with the amount of vessels in the fishing areas given the length of tow line (500 fathoms of wire) out in deep water.

Research Priorities

Spawning information and real-time management with cooperative research.