



***Illex* Fishery Performance Report**

March 2020

The Mid-Atlantic Fishery Management Council's (Council) Mackerel-Squid-Butterfish (MSB) Advisory Panel (AP) met via webinar on March 31, 2020 to review the *Illex* Fishery Information Document and develop the following Fishery Performance Report. The purpose of this report 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. Fishery Performance Reports for the other MSB species will be developed later in the year. Trigger questions noted below were posed to the AP to generate discussion. Please note: the advisor comments described below are not necessarily consensus or majority statements.

Advisory Panel members present: Katie Almeida (MA -Towndock (RI)), Howard King (MD), Eleanor Bochenek (NJ - Rutgers), Gerry O'Neil (MA - Cape Seafoods), Jeff Kaelin (NJ - Lund's Fisheries), Meghan Lapp (RI - Seafreeze), Pete Kaizer (MA - Althea K Sportfishing), Hank Lackner (NY - FV Jason and Danielle), Pam Lyons Gromen (Wild Oceans), and Greg DiDominico (NJ - GSSA).

Others present: Jason Didden, Alissa Wilson, Andy Jones, Anna Mercer, Ben Galuardi, Brooke Wright, Chris Batsavage, Kim Hyde, Lisa Hendrickson, John Manderson, Paul Rago, Sarah Gaichas, Sonny Gwin, and Doug Christel.

Trigger questions:

The AP was presented with the following trigger questions:

1. What factors have influenced recent catch (markets/economy, environment, regulations, other factors)?
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?

General

It has been previously requested that the NEFSC data updates include information on what is known and not known about ecosystem relationships for MSB species and how the various assessments already account for natural mortality/forage needs. Some AP members believe that consumption of forage stocks by marine mammals likely dwarfs mortality from fishing. There are both concerns that natural mortality may be over or under considered, and some AP members think the Council should direct the SSC to consider forage needs through a forage-based ABC control rule and further implement the policy goals of the Ecosystem Approaches to Fishery Management (EAFM) Guidance Document (<http://www.mafmc.org/eafm>). See 2018 FPR for additional details on this point <http://www.mafmc.org/ssc-meetings/2018/may-8-9>).

Staff mentioned that a new process is being developed for assessment and data updates.

A request was made previously for more information on the size distribution of landings and discards, and/or more information regarding the numbers of various fish species discarded (staff note: these are not traditionally part of the MSB FPR process but could be requested from NMFS).

AP members continued to note that several factors could be negatively impacting catches for all MSB species. Spiny Dogfish can create interference (loading nets), and/or be an ecological barrier (e.g. maybe mackerel won't go into areas with high dogfish concentrations). High dogfish populations seem to be associated with other species declining and this issue should be an important component of ecosystem management. Existing regulations, including the Northeast Canyons and Seamounts Marine Monument reduce fishing opportunities. There is strong concern that the size and breadth of all wind energy areas need consideration in terms of not just fishing but also related to loss of survey access, which could then in turn impact uncertainty/ABCs/quotas. Also, the various opportunities in the entire suite of fisheries in the area can drive effort into and out of particular fisheries in a given year.

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 2016-2019 and new markets are opening up (bait and food). MSC certification should help open new markets and increase prices. Meghan Lapp followed up after the call that SeaFreeze's sales personnel noted that combined world production of Japanese flying squid, Argentine shortfin squid, our *Illex*, and Jumbo flying squid has been down, and these species fill similar product niches, contributing to higher prices 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 impacting 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.

Abundance generally and of large squid was unprecedented in 2017-2018, especially near the closures (300-400 grams). One industry representative reported slightly smaller squid in 2018 but noted the early closure prevented access to larger squid later in the year as they grow. In a follow-up email exchange, multiple AP members reported they saw very good size near the end of the 2019 season, and that landing rates improved right up to the end of the 2019 season.

Some have noted the decline in survey indices (individual weight) and high variability of *Illex* should give the SSC pause for concern.

There is also interest in learning more about spawning habitat and timing, and NEFSC staff noted that they have been discussing with the observer program about getting more data on spawning condition from samples.

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 (this is being used by the working group). Staff notes that some public comments for the *Illex* Amendment also recommended for the primary *Illex* vessels an incidental possession limit increase to 20,000 pounds when possessing 10,000 pounds or more of longfin squid, after the *Illex* fishery closes, to allow for bycatch of *Illex* in the longfin squid fishery to be turned into landings.

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.

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 jumped in with more efficient pumping technology, increasing landing rates.

2019 was another really good season but did not unfold as similar to 2018 as the quota line suggests. Catches were low the first few weeks and started later in the southern areas. The quota would have been caught even faster if the southern areas had started strong at more recently typical (higher) catch rates. One of primary Sea Freeze vessels was out of the fishery early for a few weeks but we didn't see overall slower landings due to more vessels participating.

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 noted included:

Real-time management with cooperative research.

Spawning information.