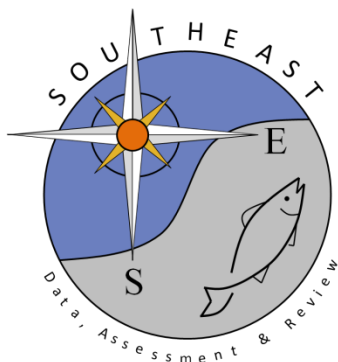


# Black Sea Bass Stakeholder Engagement Meeting Summary

Mid-Atlantic Council's Black Sea Bass Working Group

SEDAR76-RD01

Received: 7/6/2022



# Black Sea Bass Stakeholder Engagement Meeting Summary

## **Introduction:**

As part of the Northeast Regional Coordinating Council stock assessment process, the goal of stakeholder engagement is to give stakeholders a voice in the stock assessment process through open and civil dialogue that focuses on science, not results, and captures stakeholder input, questions, and concerns.

The Black Sea Bass Research Track Stock Assessment Stakeholder Engagement Meeting was held virtually on May 16, 2022 from 1:00-4:00PM. The meeting began with an overview of the black sea bass stock assessment, including a summary of stakeholder input already received throughout the stock assessment process. The remainder of the meeting was focused on discussion of following topics, with emphasis on documenting the knowledge and insights of stakeholders who have decades of on-the-water experience with black sea bass: changes over time in availability, distribution, landings, and discards, ecosystem drivers, selectivity by gear type, and socioeconomic impacts on fishing operations.

A total of 98 individuals, representing the recreational fishing industry, commercial fishing industry, research institutions, and state and federal agencies, participated in the meeting. The topical dialogue from the meeting is documented below, with stakeholder names removed for confidentiality purposes. The dialogue is documented as spoken, not summarized.

## **Definitions:**

- SH = stakeholder(s)
- WG = working group member(s), presenter(s), or expert(s)
- BSB = Black Sea Bass

# Topic 1. Black Sea Bass Abundance and Distribution

1.a. How has the availability of black sea bass to the fishery changed over time?

Stakeholder (SH) - New Jersey

For at least the past 3 or 4 years, more black sea bass (BSB) have been seen in the deeper waters in the summer months, usually from 60-80 feet in South and North Jersey. There are so many BSB that you can't get away from them and this has caused concern over dead discards. While they have always seen a lot of BSB, it was even more evident in 2020 and 2021.

NJ has seen an increase in BSB abundance over the last decade. You see juvenile BSB in back bays and estuaries in the last 2 years, never seen before. Great Bay, Little Egg Harbor, behind Atlantic City, up the Mullica River. Have not seen that before. This supports the idea of expansion. An existing tagging study helps to validate the statement that larger males were predominantly found offshore. Now they are found closer to shore, in the 15 fathom contour off Southern Jersey, Delaware, and Maryland. Large BSB appear in winter time, seeing 3-5 lb males. In 15 fathoms of water around NJ, the BSB remains all summer long and into the fall. BSB have been observed to spawn and eat at the same time, which is uncommon. Since the fish are significantly larger, they can do both at the same time. Removing the large males may result in a continuous BSB sex ratio in local areas, causing females to switch to male and therefore reducing the number of females.

SH - New York

An increase in BSB abundance has also been seen in New York, which is likely because it is the border between the northern and southern portions of the stock. Having different size limits and bag limits is another issue since New York's regulations require discarding more fish than New Jersey in the summer months. This has also been an issue in winter, but less so.

SH - Rhode Island

Rhode Island has seen an even greater increase in BSB abundance, making it almost impossible to drop a bait and not catch BSB. This starts in the Spring and runs through the Summer and into Fall. Around September/October, BSB started to move offshore.

Around 4-5 years ago, most of the big BSB were males. Now bigger females are also showing up. The females are now larger than the males that were caught 7-8 years ago. Around 7-8 years ago, there was a large BSB spawning class. RI is still seeing many juvenile sea bass. No longer seeing baby lobsters in BSB stomachs, now seeing small jonah-style crabs in BSB stomachs.

Rhode Island recreational catch data is probably skewed because the Rhode Island season is set to help out head boats in the fall and winter fishery as the cod fishery declined. The BSB

fishing season in RI was not set to maximize catch of sea bass. In 2022 the RI headboat season shifted to May so that will be a big change.

Having fished for BSB from RI since 1972, many years have had average BSB runs with a massive explosion in the last 6-8 years. All user groups are having interaction with BSB. Now, fishermen are seeing BSB overwinter in Narragansett Bay [BSB residing in Narragansett Bay through the winter]. BSB used to migrate offshore, then come back in spring to spawn, but now they stay in Narragansett Bay year round. May be caused by warming of water and/or increasing abundance.

When asked by the working group(WG) which specific size(s) of BSB are overwintering in Narragansett Bay and for how many years, the SH identified smaller BSB overwintering over the last 3 years (2019-2022).

#### SH - Rhode Island

Another SH from RI stated that tautog fishermen in late September could still catch legal-sized BSB in Narragansett Bay. In the past 1-2 years, the overwintering of smaller BSB is becoming more common with legal-size keeper BSB in Narragansett Bay this past year. The Commercial Fisheries Research Foundation may have more information on it.

#### SH - Massachusetts

Massachusetts also has BSB everywhere, from 10 feet to 100 feet of water. Can't get away from them. 20 years ago, a lot of these inshore areas were scup and fluke, now all BSB.

#### SH - Maryland

An Annapolis-based recreational angler is hearing and seeing BSB expansion, especially expansion into Chesapeake Bay in recent years. Last summer in particular, catch reports went up significantly. Started about 2 years ago; 3 years ago it was not so much. Expanding northward and southward, including in Chesapeake Bay where they never really thrived. Like global warming it is difficult to nail down when the trigger point occurred. Chesapeake Bay BSB had a sharp upturn in the last 2 years (2020). 3 years ago (2019), BSB were uncommon. Now in 2021, BSB are common in Chesapeake Bay.

*The WG stated that if they start to see changes in stock assessment model diagnostics, observations about BSB abundance and distribution from the fishery such as those heard from SHs thus far can help explain and address them. Knowing the exact timing of changes is not necessary, but a general time frame is helpful. The WG asked the SH when keeper BSB in Chesapeake Bay started to be seen.*

The SH said BSB are found typically in late summer, early fall in the center of the Chesapeake and Middle/lower bay. BSB are still a rarity at the Chesapeake Bay Bridge.

SH - Maryland

Another SH said there has been an on/off presence of BSB in Chesapeake Bay, with the really big change occurring in 2020 when they began seeing keeper sized BSB. Keeper BSB were basically unheard of in Chesapeake Bay prior to 2020, but were very common in 2020 and relatively common in 2021, Mostly in fall. Point Lookout to the Choptank were the major areas where BSB were caught in the Chesapeake Bay in recent years.

SH - Maryland

Another SH concurred with comments on the expanded availability and range of BSB in the Chesapeake Bay. North of the Choptank River is seeing much smaller numbers of BSB. However, undersized BSB are being caught and released up to approximately the Bay Bridge.

SH - Virginia

Based upon experience in the commercial BSB fishery since the mid-1990's, it is apparent that BSB have not shifted, but have started to explode [increased abundance] in VA. Having fished the same sites year after year with the same number of traps (though more in his younger years), catches have steadily increased: 2017 - 63,500 pounds, 2019 - 66,500 pounds, 2020 - 88,000 pounds, 2021 - 120,000 pounds. 2022 BSB catches are on par with last year, with more large and jumbos this year. The jumbos had been scarce in VA until recent years. Less smalls, but still some of them. Readily caught BSB up to MD line years ago. Very common to catch keepers up to that point years ago. MA has never had a problem catching their quota, but they did this past year. MA expanded catch days and the number of fish they can catch, but still couldn't make quota in 2021. Not sure why that happened. The dragger fleet is off deeper waters of NJ and are getting more of a mix bag of sizes rather than just jumbo and large. Northern BSB could be replacing other large predatory fish.

SH - Massachusetts

The website for BSB landings for the state of Massachusetts is: <https://www.mass.gov/service-details/historic-commercial-fishing-quotas-and-landings>. There have been changes in quota over time. In 2010, MA quota was 137,000 pounds. In 2021 the MA quota was 759,000 pounds.

The Massachusetts BSB fishery has shied away from the spring fishery. BSB opened up in July and has gone into the fall. The price of BSB tanked in 2021, then the weather tanked in the fall of 2021, which is why the full Massachusetts BSB quota was not caught. It was not an issue of BSB availability, but more due to market and weather conditions. The BSB fishermen in MA who did fish in 2021 met their limit.

SH - Virginia

Tagging studies in Florida have looked at grouper species and found that very large males stay offshore and never migrate inshore. Has that been looked at for BSB?

*The WG had not heard of that for the northern stock (north of Cape Hatteras) of BSB.*

The SH stated that, in general, they do not catch really large BSB. Assessment may want to keep in mind what percentage of males is needed to keep the population dynamic steady. Sex ratio could become a component to pay attention to.

*The WG acknowledged that BSB are atypical in their protogynous hermaphroditism lifestyle. Subdominant males (sneaker males) contribute to the population. Additional factors for BSB, like small males spawning and large females, gives the population more resilience. This is still important to think about and the WG will directly incorporate sex ratio in the assessment.*

SH - New Jersey

When considering stock shifts, it is usually blamed on oceanic changes, though they are relatively minor. Need to pay more attention to fishing pressure. Is stock analysis able to differentiate between the two?

*The WG stated that it is tough to disentangle the two factors [oceanic changes and fishing pressure]. Not sure that individual fish are moving north since there is a southern stock in much warmer temperatures. The fish may just be surviving better in the north and we need to understand why that is. Why was the 2011 year class so strong? It could be a combination of factors, so that is why we also look at the length and age distribution of the fish. We don't know what is driving it, but are looking at both.*

The SH urged the WG to pay attention to all the factors and not put the sole focus on oceanic changes during the stock assessment.

*The WG is looking at integrating new sources of BSB size information. Seeking to increase the data sources to understand sizes and availability of BSB.*

SH - Maryland

Can the stock assessment incorporate habitat suitability? With all of the wind turbines that are going to be installed, lots of structured habitat will be added. Does the assessment incorporate a way to quantify that?

*When the WG looks at fishery-independent surveys, we try to account for habitat suitability/availability to the survey. Inshore trawl survey during a cold year (fish may be offshore), try to standardize to account for it by using covariates (environmental factors). As far as wind energy development moving forward, it is still in its infancy. Currently, the assessment can't explicitly incorporate the impacts of wind energy. The Northeast Fisheries Science Center (NEFSC) is looking at impacts of wind farms on our assessments, surveys, and research. We do know that it is coming and will impact the BSB stock. There is not a way to quantify it at this point. NEFSC is beginning significant investment in understanding the impact of offshore wind development on our surveys and stock assessments across species. BSB prefer structured habitat, but are now more abundant on smooth bottom habitat than in the past.*

SH - Rhode Island

Having fished for BSB since 1974, the biggest increase in the number of BSB was 8-10 years ago, maybe 2011. There was certainly a correlation between the explosion of BSB and the closure of wave 1/wave 2 offshore recreational BSB fishery. It has always been the assumption that those are the spawners critical to the stock. But the stock has remained high since that closure. We have seen a big increase in the number further offshore.

## Topic 2. Black Sea Bass Discards and Discard Mortality

SH - New York

A SH involved in the offshore BSB fishery for the last 10 years (originally inshore) stated that BSB are caught in up to 240 feet of water. There is barely any discard mortality in less than 100 feet, with no barotrauma. For BSB caught in 180-240 feet of water, every fish has barotrauma. The SH assumes they all die unless vented. Venting seems to help and they swim out of sight. When fishing in less than 100 feet of water, which may be 98% of the fishery, it seems like there is very little discard mortality. Fish are hooked in the corner of the mouth, then swim away. In November/December, if you throw a BSB back, they all die. This is a major issue in deep water, but not inshore. The northern states have a 15-16 inch size limit. South Jersey has a 13 inch size limit, so discard is less of an issue since almost everything is a keeper. For New York and north, there is no sense going out in December where you catch 2:1 non-keepers to keepers. From November-December, there should be a New York - Massachusetts size limit that goes down. The scup fishery in New York and north is open year round. It is hard to get away from BSB in winter when targeting scup, which results in tremendous waste. The SH wants scup shut down from January - April.

*The WG acknowledged that it is challenging from the management side to get at those issues. Currently, the assessment uses one discard rate across the entire year and area. Mortality rates may be different at different times of year, so the assessment may be able to incorporate that.*

The SH asked if you get all fishermen to say the stock benefits if you close scup for waves 1 & 2, could that be an option.

*The WG noted that this is outside the scope of the BSB stock assessment, but that a management approach such as that would be more straightforward than changing size limits by time of year.*

SH - Rhode Island

NMFS threatening to close the scup fishery this year will hurt the party boat industry. But if they do close the scup fishery from January through April it may reduce dead BSB discards.

SH - New Jersey

A SH asked if the assessment incorporates any type of information regarding the range of depths over which BSB are released? This is a concern since it has a major impact on discard mortality.

*The WG is actively looking at that, trying to reassess what discard mortality rates might be and parameterize across the model. It is hard to get depth information for recreational catch. We are trying to find ways to get at distribution of catches, with proxies for inshore vs offshore, but the information is often limited. In the last BSB assessment, they tried to look at the seasonality and distribution of catches, now trying another attempt at it while considering new literature.*

SH - New Jersey

There is not much BSB discard mortality inshore, but outside of 100 feet there is barotrauma. Over the years, some fishermen started using new tools and that seems to work quite well at reducing discard mortality. Some of the studies (with Dr. Eleanor Bochanek) show impacts on discard mortality in deeper depths. There is more BSB abundance since the recreational wave 1 fishery has stopped. Instead of a bag limit for head boats, do a boat limit. That would stop discard mortality once you reached the boat limit as long as the boat heads back at that time.

The BSB stock is in good shape, so why do recreational fishermen keep getting penalized? Catches will always go over the target because there are so many fish out there. Quota has not been liberalized enough for what is actually out there.

SH - New Jersey

The Rutgers study in New Jersey (Dr. Douglas Zemeckis discard mortality study) and the January 2017 Dr. Olaf Jensen discard mortality study (influence of size/age/spawning season on sex) should be looked at. They found that fish released in poor condition were assumed to die, but later were recovered alive. This could help to inform discard mortality.

*The WG has reviewed both of those papers and are discussing how to use the results of that research to inform the stock assessment.*

In the Zemenckis and Jensen studies, most tagged fish stayed offshore, while inshore fish stayed inshore. Seems to be separate offshore biomass and inshore biomass of BSB. As the size of the fish goes up, the mortality rate is also going to go up. If you keep raising the size limit, you will keep raising the mortality rate. A lot of frustration is based on the science since they do not believe that MRIP counts as science.

*The WG acknowledged that this is a complex process. They are doing the best science they can to inform management.*



## SH - New Jersey

A study showed that off NC, smaller BSB had a higher discard mortality and smaller recapture rate. While physiological conditions may be more severe for larger individuals, mortality overall may not correlate in that same direction.

## SH - Rhode Island

In Rhode Island, the discard mortality (barotrauma) varies seasonally because of the depth of the BSB fishery. For the first half of the year, discard mortality is below 15% for rod and reel because those catches occur in shallow water. In the second half of the year, the fish move offshore and you have to catch them at greater depths. You need to include seasonal and depth-related discard mortality rates.

*The WG asked if the recreational boats are fishing in the same places as the for-hire boats? Or are they in different locations? Since party charters submit VTRs, it is possible to get some depth information from that, but it is very difficult to derive depth or fishing location from MRIP data.*

The SH explained that in RI, there is probably some similarity between fishing areas for recreational and hook and line, which tend to fish shallower waters. In RI, there are separate seasons between charter and recreational. Recreational boats are not going as far offshore, but there is more access in the spring. The charters are later in the season to replace the cod fishery.

## SH - New Jersey

In New Jersey, the BSB inshore season is in spring, summer, and fall, with fishing happening in 40-80 feet of water. Later, boats move offshore and fish in 100 feet and deeper. The fishery migrates seasonally with temperature.

## SH - Rhode Island

In November to December, fishing happens in 180-240 feet of water. They don't see private boats out there. It is almost all for-hire boats fishing from Thanksgiving to Christmas.

## SH - Virginia

In the Mid-Atlantic in January and February, there are just as many small boats in 180-200 feet of water. But that varies by the area.

## SH - Massachusetts

In Massachusetts, from May to September the fishery is in 15-40 feet of water. It is not appropriate to lump in discard mortality with boats that fish in 200 feet of water. Recreational and charter boats are in the same areas; the weekends are like a zoo! According to MRIP, wave 3 shows a significant number of recreational boats out there fishing, but on the water you only see the for-hire fleet out there.

SH - New Jersey

Over the years, there has not been much change in discard mortality in the BSB trap fishery (the SH runs double the number of escape panels required). Mortality from the traps is very low, from 100-120 feet. Pulling traps is much slower than hook and line, so less barotrauma in deeper waters too. The SH estimates 90-100% survival.

SH - New Jersey

In North Jersey, everyone is fishing together for BSB and fluke. Once October to December, there are no little boats with us. The smaller boats are targeting stripers.

### 3. Socio-economic impacts on fishing operations

How have changes in fuel/overhead costs over time and how do those impact on fishing operations and landings?

SH - New Jersey

Economics affect fishing businesses in NJ very much. This year is going to be very hard - with more than a double rise in the cost of fuel, bait costs have also gone up a lot. Fuel has gone from \$1.45 in 2020, to over \$6.00 today. Unprecedented fuel costs are driving the bottom line for BSB fishermen, and the bottom line for the bait fishermen too. They are less willing to go fish because trip limits make a single trip unprofitable.

SH - New York

The price of fuel was no problem at \$2 a gallon. But at \$6 a gallon, they have to really consider where they go and won't leave the dock with less than 10 people on a trip. They run 800-1,000 gallons a week, and \$6,000 a week in fuel costs is prohibitive. It takes 2 days just to pay the fuel bill with a lot of people on the boat. There are guys not even putting their boats in or leaving the docks due to the cost of the fuel, and they have money, not the poor guys.

SH - Virginia

Socioeconomics have never really been considered for the for-hire sector in the Mid-Atlantic. Their customers are mostly low-income people who could not afford their own boat or a private trip. With size/bag/season limits, people can't afford to come down as much as they used to. The SH has been doing this for 35 years, and this is bad. Low-income people are not coming. It costs the guests a lot more to go fishing and that prevents many from taking the trips. Nothing is being done with socioeconomics in fisheries management.

*The WG thanked the SH for sharing and stated that understanding what is impacting how the BSB fishery operates and the quantity and distribution of catch is absolutely critical to the stock assessment.*

SH - New Jersey

Fuel costs and inflation both impact BSB fishing operations. There will be less barotrauma this year because people won't go to 240 feet of water if they can find fish over 80 feet of water. Point Pleasant boats were fishing inside of Sandy Hook yesterday. Not making much off of that. Better to make a little money off something than no money by staying at home. The party boat industry will make less this year.

SH - Massachusetts

Being full time fishermen, they have to absorb the costs. Selling the fish is the biggest problem [commercial sector], since the market hasn't come back since COVID. 2020 was absolutely horrible, especially the last quarter. Still averaging more than \$1/lb less than what he was receiving before COVID. Volume has started to pick up, which helps absorb some of the cost. Especially the smalls and mediums, through large and jumbos, it doesn't take any volume of fish to drive the market way down. Have to wait for restaurants to open back up, or whatever is causing the issue, to go back. BSB, flounder, and scup are all seeing this market issue.

SH - Rhode Island

Recreational fishermen are affected by economic factors as well. Impacts to boat dealers, bait shops, etc. will be seen. For recreational boats, it's not a numbers game, but being able to go fish. Fuel prices will have a restrictive impact on a whole lot of people in the near term. Businesses that revolve around the recreational fishery will be impacted.

## 4. Ecosystem Drivers

SH - Maryland

A SH explained that in the last Mid-Atlantic State of the Ecosystem Report, the NEFSC reported recent erosion of the cold pool, meaning larger summer thermal changes in both shoal and southern regions. Has the working group looked to see if this change is synchronous with BSB distribution changes?

*The WG responded that they have not discussed looking at cold pool to date. They are looking at the distribution of temperatures across the shelf in the winter, and looking at inshore movement of the shelf slope vs intrusion of the labrador and how that affects survival. Late summer storms destratify the water column, which suppresses feeding, some evacuate the area altogether. Not sure how it will change in the future, but are considering it with respect to late summer storms.*

SH - Massachusetts

In the chat, a SH asked (1) Has the Ecosystems Influences program considered ecological economics models like MIMES with MIDAS to explore the effects of natural capital and

ecosystem services in the ocean on BSB Life Stages? (2) How is the 2021 NOAA Fisheries Status of the Ecosystems Report for the Mid-Atlantic and New England regions being incorporated in the BSB stock assessment process (Including Essential Fish. Habitat)? (3) As a resident of Cape Cod, the loss of a working waterfront and lack of mooring availability in our coastal embayments appears to be a constraint on saltwater angling. How will this be addressed in the socioeconomics studies component of this endeavor? (4) In Cape Cod Bay and the wider Gulf of Maine, a shift in the summer/fall between the grazing food chain to microbial food web has increased the length of the marine food chain which decreases the yield of LMRs. Have you considered comparing net primary production and community respiration to the yield of BSB as its range shifts in space and time? Community respiration increases with higher water temperatures unlike primary production.

*The WG responded that they are not assuming maturity is at the same time across the entire time series. Maturity is included as a time-varying factor based upon biological data. The WG is also pursuing the Woods Hole Assessment Model (WHAM), which allows the integration of environmental covariates. The BSB ecosystem socioeconomic profile is also being developed to be a living document to inform the assessment and aid in management.*

SH - New Jersey

I didn't hear anything about windmills, but it will be a major factor that must be taken into account with any future assessments done. We don't know what the fish will do, behavior wise. We need studies to establish what the fish will do. Once wind farms are in, stock assessments will be very hard to do. Is anyone taking that into account?

*Currently, there is no way to account for the future impact of offshore wind on BSB in the stock assessment. However, in future BSB stock assessments, indices will be adapted and new surveys will be incorporated. There will be a lot of change over the coming decades.*

SH - Rhode Island

The Bureau of Ocean Energy Management (BOEM) conducted a cumulative environmental impact assessment on the 13 wind farms to be built along the Atlantic seaboard between now and 2030 and found modest effects on fisheries management and North Atlantic right whales. Duke University's research program is exploring the effects of windfarms on wildlife. There is a lot of academic research in this topic supported by BOEM and the Department of Energy.

SH - New Jersey

There is a lot of distrust in BOEM. It is doubtful that they will consider or account for impacts of offshore wind on fisheries, including BSB.

SH - Rhode Island

There may be a gap in the ecosystem that allowed BSB to expand to be as populated as it is. A good percentage of the cod population has been lost, and maybe BSB moved in to fill that void. Not convinced that BSB biomass is sustainable at the current high level. Some of the divers

report that there is nothing left on the humps after 3-4 months of BSB being there. On Block Island the striped bass changed to surface and mid-column bite, no longer a bottom bite, presumably because black sea bass are outcompeting stripers for hooks on the bottom. The belief is that sea bass have eaten everything on the bottom.

*The WG will be looking at food habits for BSB, how they vary across space and time and how that might impact the population dynamics. The WG has not completed that component of the stock assessment yet.*

SH - New Jersey

There are some parallels between red snapper in the Gulf of Mexico and BSB in the north Atlantic. Fisheries managers previously believed red snapper stayed on high-relief parts of the bottom, but found that they had expanded out to areas where they had never been known to go. Could also apply to BSB on the east coast. The WG should look into literature on red snapper habitat use and assess similarities to BSB.