South Atlantic Fishery Management Council
Snapper Grouper Advisory Panel
Black Sea Bass Fishery Performance Report
November 2017

The following Fishery Performance Report is provided to the Snapper Grouper Advisory Panel to be updated at the April 2022 meeting. The Advisory Panel is requested to review this document and the questions provided in the Briefing Book so the information below can be updated ahead of the SEDAR 76 stock assessment.

At their November 2017 meeting, the South Atlantic Fishery Management Council's (Council) Snapper Grouper Advisory Panel (AP) reviewed fishery information for black sea bass and developed this fishery performance report (FPR). The purpose of the FPR is to assemble information from AP members' experience and observations on the water and in the marketplace to complement scientific and landings data. The FPR for black sea bass will be provided to the Scientific and Statistical Committee (SSC) to complement material being used in the standard assessment (SEDAR 56) and to inform future management.

Advisory Panel Members:

David Moss (Chairman; Recreational/FL)
Jimmy Hull (Vice-Chairman; Commercial/Dealer/Retail/FL)
Robert Johnson (Charter/FL)
Rusty Hudson (Commercial/FL)
Vincent Bonura (Commercial/FL)
Manny Herrera (Commercial/FL)*
James Freeman (Commercial/FL)*
Greg Mercurio (Charter/FL)*
Richard Gomez (Charter/FL)
David Snyder (Consumer Rep/GA)
Deidra Jeffcoat (Charter/GA)
Gary Manigault Sr. (Charter/SC)
Kerry Marhefka (Commercial/Dealer/SC)
Wayne Mershon (Commercial/Dealer/SC)*
Jim Moring (Recreational/SC)
Jim Atack (Recreational/NC)
Red Munden (Conservation/NC)
Robert Lorenz (Recreational/NC)
Dick Brame (NGO/Recreational/NC)
Robert Freeman (Charter/NC)
Andy Piland (Charter/NC)
Scott Buff (Commercial/NC)
Jack Cox (Commercial/Dealer/NC)
Todd Kellison (At-large/NOAA)
*not in attendance

Fishery Overview

Information on the black sea bass fishery in the South Atlantic region is presented in a Fishery Information Document intended to provide an overview of several aspects of the fishery including life history of the species, stock status, management overview, and trends in landings and fishery economics for both the commercial and recreational (for-hire and private) sectors. The information was provided as background to elicit the discussion presented in this Fishery Performance Report.

Stock Observations

Off Ponce Inlet, Florida, commercial fishermen have seen a decline in abundance of black sea bass over the past 5 years. Black sea bass have been historically abundant during winter months or cold-water events. However, the water has remained warm in winter months for the past few years and kept the fish from coming in.

After a peak in abundance caused by higher than average recruitment around 2013, the stock declined. During the time of high abundance, there were two or three brothers who were fishing pots every day and they were responsible for the majority of the black sea bass landings in Florida during that couple of years. This was immediately prior to management changes going into place for the pot sector (endorsement program went into place in 2013). None of those fishermen have fished for black sea bass in recent years and one of them may be selling his endorsement. This is reflective of the decline in black sea bass abundance off east Florida. However, there are encouraging signs that the stock is rebounding. One AP member reports a dramatic increase in the number of black sea bass on commercial trips (using pots) after the 2017 hurricanes. The fish seem to have come back to areas where abundance had declined. The water was much cooler and darker after the storms.

The black sea bass fishery off North Carolina is healthy. However, it takes longer for catches to ramp up because the water is staying warmer a lot longer. Nowadays, fishermen are seeing good catches in late October/November whereas they used to see comparable harvest starting in September in the mid-2000s.

From the perspective of a diver, the abundance of black sea bass off North Carolina has decreased over the past 2 to 3 years.

Private recreational fishermen in North Carolina have observed that black sea bass over 13 inches are no longer available inshore (inside 12 miles). They are mostly out of reach to the average private angler. This seems to be tied to water temperature not getting low enough during winter months for the fish to move to areas where they used to be available to fishermen.

In terms of observations possibly tied to recruitment, fishermen in Florida report seeing all sizes of black sea bass. They see small black sea bass in stone crab traps in the rivers and there is an abundance of small individuals close to shore in 50 feet of water around Ponce Inlet.
In that area, fishermen have historically observed small black sea bass in the rivers. There is interest to explore whether the red snapper closure has affected the abundance of small black sea bass in the rivers.

Charter captains in Georgia report that the population does not seem as abundant as it was several years ago. They are seeing a lot of small sea bass offshore, which they had not seen until recently, so perhaps that is indicative of a strong year class. They also report encouraging signs that black sea bass are coming back.

Fishermen report a higher abundance of black sea bass on natural reefs than on artificial reefs throughout the region. Off Florida, fishermen have observed black sea bass gorging themselves on small crabs, worms, clams, scallops etc. (even baby turtles) on live bottom areas. On artificial reefs off North Carolina, fishermen report that black sea bass may become momentarily abundant but the fish do not remain there long enough for anglers to have continued access to them.

Asked whether the size of black sea bass being encountered has changed over the past 5 years, fishermen from Florida maintain that it has not. However, the size of fish available to catch is tied to water temperature. Larger individuals are typically encountered during winter. Similarly, off North Carolina, recreational fishermen report that legal sized fish (13 inches and above) are no longer available inside of 12 miles during the winter months (December-January). Larger fish are still there but they remain far offshore (30 miles) because the water inshore stays too warm in the winter. During the summer of 2017, in 60-90 feet of water (about 18 miles off the beach), there were large numbers of 12.25-inch and 12.75-inch black sea bass that people had to keep throwing back.

Commercial Observations

In Florida, commercial fishermen/dealers report that demand for black sea bass is ever increasing and so is the price.

Off North Carolina, the price of black sea bass has been affected by an increase in the annual catch limit for the species in the Greater Atlantic region trawl fishery. This has caused a decline in the price per pound of large (jumbo) fish but an increase in the price of medium fish partly because trawl fishermen can be selective about the size of fish they target based on the size of their nets. The lack of the medium fish on the market benefits fishermen fishing off North Carolina.

For restaurants, the price for black sea bass has increased over the past 5 years.

A lot of black sea bass pot endorsements have been transferred in recent years when snapper grouper commercial permits changed hands. However, some of the new endorsement holders are opting not to use their endorsements in the winter months because there are other species they can target during that time of the year.

Asked to provide insight into what may have caused commercial landings to decline off of Florida since 2011, a commercial fisherman who operates off Ponce Inlet, Florida, provided information on his black sea bass average catch per trip since 2011 (**Table 1**). After 30 years of fishing for black sea bass, this fisherman is one of the few remaining that use pots to fish for black sea bass off Florida. A sharp decline in average catch per trip based on this fisherman's records is evident from 2013 to 2014. This was partly due to a change in the fishing year and a prohibition on the use of pots in a large area in the South Atlantic to protect migrating whales. This closure prevented many fishermen from targeting black sea bass with pot gear over historical fishing grounds during the winters of 2011 through 2015.

Table 1. Average catch (in pounds) of black sea bass landed in Florida using pot gear from 2011 through 2017 based on a fisherman's records.

Year	Average catch per trip (pounds)
2011	770
2012	774
2013	465
2014	154
2015	112
2016	63

2017*	75

*NOTE: The fisherman who supplied this information stated that black sea bass were plentiful during the 4 trips he took after the 2017 hurricanes that affected the South Atlantic region.

Florida fishermen recount that from about 2009, effort in the black sea bass pot fishery ramped up in response to high abundance. Also at that time, the Council was considering a large area closure to protect red snapper in Amendment 17A. The area closure did not go into effect, but it may have affected fishermen's behavior, according to an AP member. Many fishermen in Florida started pot fishing at that time because that was one of the only things they thought they would be able to do if the proposed area closure took effect.

Recreational Observations

Recreational landings of black sea bass in the South Atlantic have generally declined since about 2011. Asked to provide possible reasons for the observed decline, fishermen stated that a decline in abundance coupled with a recreational minimum size limit that is too large has caused the drop in landings. However, fishermen from North Carolina stated that there may be a perception that abundance of black sea bass has declined in recent years based on landings; however, environmental factors such as water temperature have contributed to keeping fish away from inshore areas accessible to most anglers. Overall, fishermen agree that too large a minimum size has had an effect on black sea bass recreational landings throughout the South Atlantic region.

In Florida, demand for black sea bass in the charter component has decreased because the recreational minimum size limit is too large.

Off Georgia, the demand for black sea bass has not really changed in recent years but charter vessels stopped targeting them in favor of sheepshead. Demand for black sea bass may have declined somewhat for charter vessels because people are not allowed to keep as many fish as they would like to. Among charter vessels operating in North Carolina, captains agree that their clients do not book a charter to go catch black sea bass; they are part of the "grab bag" that attracts people. However, for every legal sized black sea bass that is kept, 4 or 5 undersized fish are being thrown back (mostly in the 12+ inch range) and this is frustrating for customers.

Observations on management measures

AP members were in agreement that the current commercial minimum size limit of 11 inches is appropriate for the gear being used.

Some AP members stated that managers may want to re-consider apportioning the commercial annual catch limit by gear type (pots & hook-and-line). This has not been an issue recently as the commercial annual catch limit has not been met due to recent changes to regulations. However, if commercial catches increase in the future, there may be a need to re-consider allocating by gear.

Regarding the recreational minimum size limit, AP members agreed that the current 13-inch limit is not appropriate. Some members stated that the current limit decreases access to the fish because the legal-sized fish are too far offshore, beyond the reach of the average private recreational angler. Consequently, the high number of discards in the recreational sector is due to anglers interacting with smaller fish inshore. AP members reiterated that the current

recreational minimum size limit has had a large impact on recreational landings throughout the region.

AP members agreed that the annual catch limits (commercial and recreational) are appropriate. It was noted that management typically responds to increases a stock's abundance by increasing the annual catch limit. Fishermen maintain that this situation played out with black sea bass after the last update to the stock assessment. Now, fishermen are concerned that since recent fishery-independent data show a declining trend in abundance, management will respond by reducing the annual catch limit. Fishermen are critical of this knee-jerk reaction and urge the Council to strive for more stable management, focus on better monitoring, and opt for less dramatic changes in catch levels. They note that fisheries respond to environmental factors that are independent of fishing activity and too often, under the current management approach, fishermen end up paying the price.

Asked whether the mesh size for black sea bass pots should be changed in order to optimize the catch, most AP members agreed the current specifications are appropriate. Off North Carolina, commercial fishermen using pot gear report very few (half a dozen) sub-legal sized fish and low release mortality. While one scientific study showed that a 2.25-inch mesh would optimize commercial catches, fishermen who use pots do not feel the expected improvement in catch justifies the expense of changing the mesh size on their gear. Some fishermen explored the availability and cost of 2.25-inch mesh and found no supplier in the region that could make it readily available at a non-prohibitive cost. The current 2-inch mesh is adequate as long as the commercial minimum size limit does not change.

Regarding the pot area restriction, black sea bass pot fishermen from Florida stated that the regulation has pushed fishermen off their prime fishing grounds.

Environmental/ecological Observations

Off of Ponce Inlet, Florida, fishermen report a lack of cold water over several years. Black sea bass normally migrate inshore during winter months to prime fishing grounds but this movement has not taken place in some time. Fishermen maintain that is also the reason for few observations of Right Whales in that area in recent years.

Warmer than normal water temperature was also cited as the reason for the decline in the numbers of large black sea bass inshore off North Carolina.

There was a period in 2014-2015 where there was a noticeable decline of black sea bass on reefs off Florida. However, fish are now abundant in those areas.

Off east Florida, commercial fishermen report black sea bass spawning primarily from January through March. Off North Carolina, fishermen report large females in spawning condition in March and April.

The habitat range of the black sea bass stock is so large that fishing mortality is a small factor in overall stock abundance. Off Florida, they are caught in crab traps inshore as well as out to 500-600 feet of water. Fishermen maintain that management actions such as minimum size limits

have been ineffective in keeping the population healthy. Black sea bass are short-lived animals that become sexually mature at a young age and adapt to changing conditions. Environmental factors are in charge.

Research Recommendations

- Recruitment monitoring with small mesh traps.
- Importance of offshore habitats as nurseries. Recent scientific studies suggest that estuarine nurseries may be more important than offshore ones. However, these data are limited and more research is needed.
- Conduct analyses to establish the appropriate minimum size limit that would achieve MSY before considering minimum size limit changes.
- Fishery independent sampling should be expanded to include winter months to inform year-round fisheries.

Other Observations

Pot fishermen expected to be able to catch lionfish in their pots. However, this has not been the case as lionfish appear to be attracted to traps as habitat. Fishermen in the Florida Keys are catching lionfish in their lobster traps because the traps are left to soak long enough for lionfish to colonize them. However, there has been reluctance to target lionfish with traps because of the potential for increased bycatch. Lionfish continue to be abundant and problematic throughout the South Atlantic region.

Fishermen agree that the fishery-independent index of abundance is very informative of the status of the black sea bass population as Chevron traps are very effective at catching this species in particular. The index shows a recent increase in the abundance of black sea bass and fishermen find this encouraging. However, they note that even though the index showed a large recruitment event around 2011 and now shows abundance to be back down to 1993 levels, this does not necessarily mean the South Atlantic black sea bass stock is in trouble. It may simply mean that recruitment has slowed down (at least in areas where the survey operates). Further, as recruitment success is based on environmental factors, it is worth considering that the current overabundance of red snapper and lionfish may be impacting black sea bass recruitment.

Bottom temperature measurements are taken during chevron trap deployments (one CTD cast for every 6 traps) but not directly on the trap itself. In the Mid-Atlantic and New England regions, there is evidence of northward shifts in species' distributions over the recent past. Shelf waters in that area have been warming over the past couple of decades. However, according to SEAMAP trawl data in the South Atlantic region, there have not been similar changes in species' distributions as is regions further north, and water temperatures over the shelf break have been stable over the past couple decades (caveat is those are temperatures are measured during September-October every year). There has not been research to look at inter-annual variability in water temperatures and how it may have affected abundance of black sea bass.