Black Sea Bass Fishery Information Document

June 2018

This document provides a brief overview of the biology, stock condition, management system, and fishery performance for black sea bass, with an emphasis on 2017, the most recent complete fishing year.

1. Biology

Black sea bass (*Centropristis striata*) are distributed from the Gulf of Maine through the Gulf of Mexico. Genetic studies have identified three stocks within that region. Black sea bass north of Cape Hatteras, North Carolina are considered one unit stock. Adults and juveniles are mostly found on the continental shelf. Young of the year (i.e. fish less than one year old) can be found in estuaries. Adults prefer to be near structures such as rocky reefs, coral patches, cobble and rock fields, mussel beds, and shipwrecks. Adults in the mid-Atlantic show strong site fidelity during the summer and migrate to offshore wintering areas south of New Jersey when water temperatures decrease in the fall. Adults in the South Atlantic and Gulf of Mexico do not migrate during the winter.[1]

Black sea bass are protogynous hermaphrodites, meaning they are born female and some later transition to males, usually around 2-5 years of age. Male black sea bass are either of the dominant or subordinate type. Dominant males are larger than subordinate males and develop a bright blue nuccal hump during the spawning season. About half of black sea bass are sexually mature by 2 or 3 years of age and about 20 cm (about 8 inches) in length. Most black sea bass greater than 19 cm (about 7.5 inches) are either in a transitional stage between female and male or have fully transitioned to the male stage. Results from a simulation model highlight the importance of subordinate males in the spawning success of sea bass. This increases the resiliency of the population to exploitation compared to other species with a more typical protogynous life history. Black sea bass reach a maximum size of about 60 cm (about 24 inches) and a maximum age of about 12 years.[1,2]

Black sea bass in the mid-Atlantic spawn in nearshore continental shelf areas at depths of 20-50 meters. Spawning usually takes place between April and October. During the summer, adult black sea bass share complex coastal habitats with tautog, hakes, conger eel, sea robins and other migratory fish species. Essential Fish Habitat (EFH) for black sea bass consists of pelagic waters, structured habitat, rough bottom, shellfish, sand, and shell, from the Gulf of Maine through Cape Hatteras, North Carolina. Juvenile and adult black sea bass mostly feed on crustaceans, small fish, and squid. The Northeast Fisheries Science Center (NEFSC) food habits database lists spiny dogfish, Atlantic angel shark, skates, spotted hake, summer flounder, windowpane flounder, and monkfish as predators of black sea bass.[1]

2. Status of the Stock

A benchmark stock assessment for black sea bass was peer-reviewed and approved at the 62nd Stock Assessment Review Committee (SARC 62) in December 2016. The protogynous life history, structure-orienting behavior and potential spatial stock structure of black sea bass posed challenges for prior analytical assessments of this species. The 2016 benchmark stock assessment was successful at evaluating and addressing many concerns and the greatest sources of uncertainty associated with prior stock assessments.[3,4]

The 2016 benchmark assessment indicated that the black sea bass stock north of Cape Hatteras, North Carolina was not overfished and overfishing was not occurring in 2015, the terminal year of the assessment. Spawning stock biomass (SSB) averaged around 6 million pounds from the late 1980's and early 1990's and then steadily increased from 1997 to 2002 when it reached 18.7 million pounds. SSB then declined until 2007 (8.9 million pounds), followed by a steady increase through 2015 with SSB at its highest estimated level (Figure 1). The model-estimated SSB in 2015 was 48.89 million pounds (22,176 mt), 2.3 times SSB at maximum sustainable yield, SSB_{MSY} = 21.31 million pounds (9,667 mt).[4]

The fishing mortality rate (F) in 2015 was 0.27, below the fishing mortality threshold reference point ($F_{MSY\ proxy}$ = F40%) of 0.36 (Figure 2). Fishing mortality was very high in the early 1990's, typically greater than 1.0, but declined and stabilized after 1997 once joint management by the Mid-Atlantic Fisheries Management Council (Council) and Atlantic States Marine Fisheries Commission (Commission) began. Fishing mortality was below the $F_{MSY\ proxy}$ reference point during 2011-2015. Model estimated recruitment was relatively constant throughout the time series except for large peaks from the 1999 and 2011 year classes (i.e. fish spawned in those years). Average recruitment of age 1 black sea bass from 1989 – 2015 was 24.3 million fish. The 1999 year class was estimated at 37.3 million fish and the 2011 year class was estimated at 68.9 million fish.[4] Catches in many state surveys, with the exception of New Jersey and Virginia, as well as the 2017 NEFSC bottom trawl survey, suggest that the 2015 year class is also above average.[5]

A data update with catch, landings, and fishery independent survey information through 2017, including recent estimates of commercial and recreational fishery catch and fishery independent indices, will be provided by the NEFSC by July 2018.

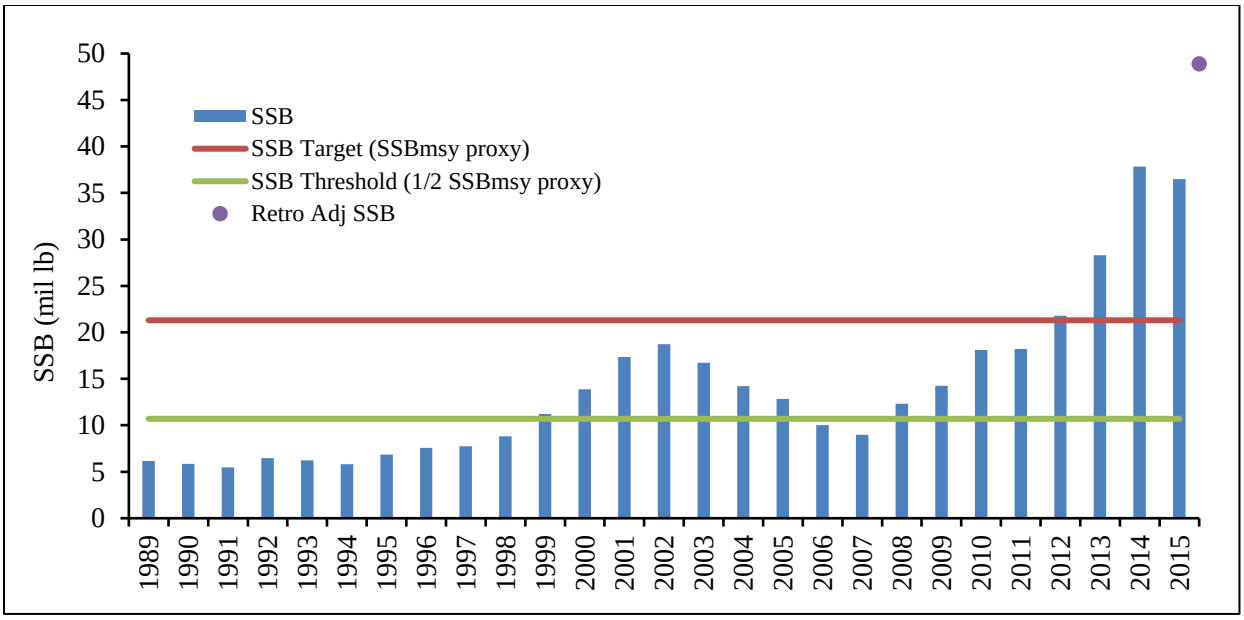

Figure 1: Spawning stock biomass of black sea bass, 1989 - 2015, and biomass reference points from the 2016 benchmark stock assessment. The 2015 retro-adjusted spawning stock biomass value was generated to correct for the retrospective bias present in the assessment model and is used as the estimate to compare to the reference points.[4]

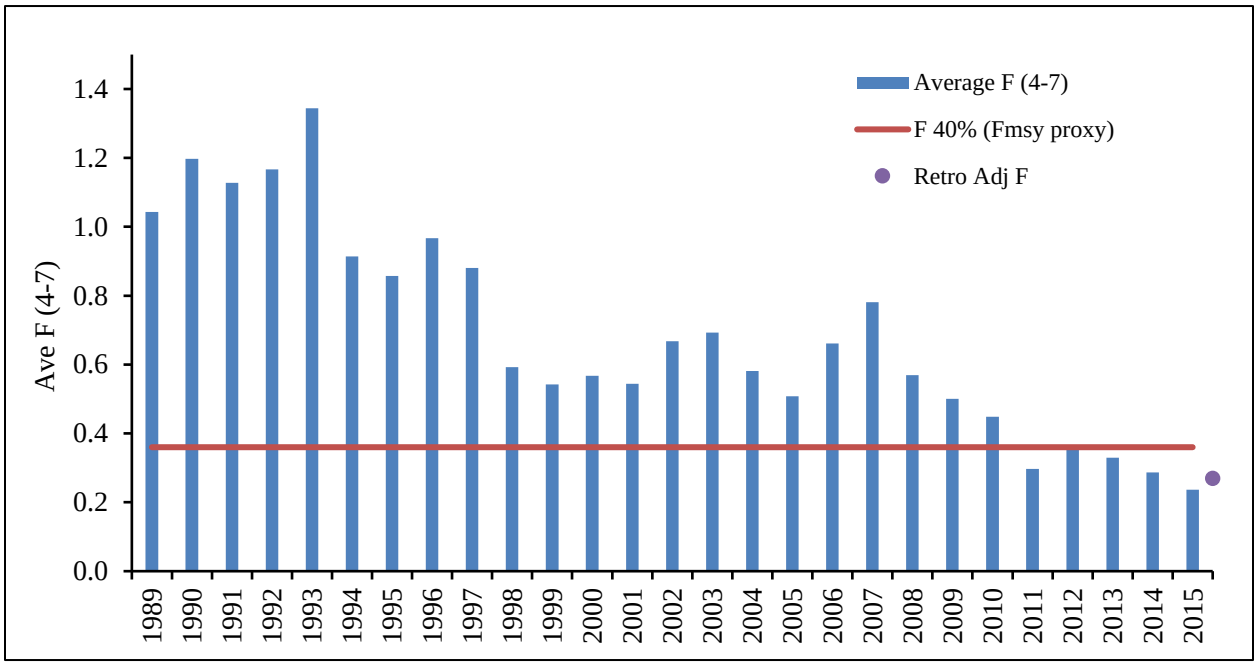

Figure 2: Fishing mortality rate on black sea bass ages 4-7 and the $F_{MSY\ PROXY}$ reference point from the 2016 benchmark stock assessment. The 2015 retro-adjusted fishing mortality rate value was generated to correct for the retrospective bias present in the assessment model and is used as the estimate to compare to the reference points.[4]

3. Management System and Overall Fishery Performance

The Council and the Commission work cooperatively to develop fishery regulations for black sea bass from Maine through Cape Hatteras, North Carolina. The Council and Commission work in conjunction with the National Marine Fisheries Service (NMFS), which serves as the federal implementation and enforcement entity. This cooperative management endeavor was developed because a significant portion of the catch is taken from both state waters (0-3 miles offshore) and federal waters (3-200 miles offshore, also known as the Exclusive Economic Zone or EEZ). The management unit for black sea bass includes U.S. waters from Cape Hatteras, North Carolina to the U.S.-Canadian border.

The Council has managed back sea bass since 1997 when it amended the Summer Flounder and Scup Fishery Management Plan (FMP) to include black sea bass. The original FMP and subsequent amendments and frameworks are available at: www.mafmc.org/fisheries/fmp/sf-s-bsb.

Commercial and recreational black sea bass fisheries are managed using catch and landings limits, commercial quotas, recreational harvest limits, minimum fish sizes, gear regulations, permit requirements, and other provisions. The Council allocates 49% of the total allowable landings to the commercial fishery as a commercial quota and 51% of allowable landings to the recreational fishery as a recreational harvest limit (RHL).

The Council's Scientific and Statistical Committee recommends annual Acceptable Biological Catch (ABC) levels for black sea bass, which are then approved by the Council and Commission and submitted to NMFS for final approval and implementation. The ABC is divided into commercial and recreational Annual Catch Limits (ACLs), based on the landings allocations prescribed in the FMP and the recent distribution of discards between the commercial and recreational fisheries. The Council first implemented recreational and commercial ACLs, with a system of overage accountability, in 2012. Both the ABC and the ACLs are catch limits (i.e., include both projected landings and discards), while the commercial quota and RHL are landing limits.

Table 1 shows black sea bass catch and landings limits from 2008 through 2018, as well as commercial and recreational landings through 2017. Total black sea bass landings (commercial and recreational) peaked in 1986, when approximately 15.8 million pounds of black sea bass were landed. About 8.15 million pounds of black sea bass were landed by commercial and recreational fishermen from Maine through Cape Hatteras, North Carolina in 2017 (Figure 3).[6,7]

Table 1: Summary of catch and landings limits, and landings for commercial and recreational black sea bass fisheries from Maine through Cape Hatteras, NC 2008 through 2018.

Management measures	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ABC (mil. lb)	--	--	4.50	4.50	4.50	5.50	5.50	5.50	6.67	10.47	8.94
Commercial ACL (mil. lb)	--	--	--	--	1.98	2.60	2.60	2.60	3.15	5.09	4.35
Commercial quota (mil. lb)[a]	2.03	1.09	1.76	1.71	1.71	2.17	2.17	2.21	2.71	4.12	3.52
Commercial landings (mil. lb)	1.93	1.18	1.68	1.69	1.72	2.26	2.18	2.29	2.59	3.99	--
% of commercial quota landed	95%	108%	95%	99%	101%	104%	100%	104%	96%	97%	--
Recreational ACL (mil. lb)	--	--	--	--	1.86	2.90	2.90	2.90	3.52	5.38	4.59
RHL (mil. lb)[a]	2.11	1.14	1.83	1.78	1.32	2.26	2.26	2.33	2.82	4.29	3.66
Recreational landings (mil. lb)	2.03	2.56	3.19	1.17	3.19	2.46	3.60	3.79	5.19	4.16	--
% of RHL harvested	96%	225%	174%	66%	242%	109%	159%	163%	184%	97%	--

[a] Commercial quotas and RHLs reflect the removal of projected discards from the sector-specific ACLs. For 2006-2014, these limits are also adjusted for Research Set Aside.

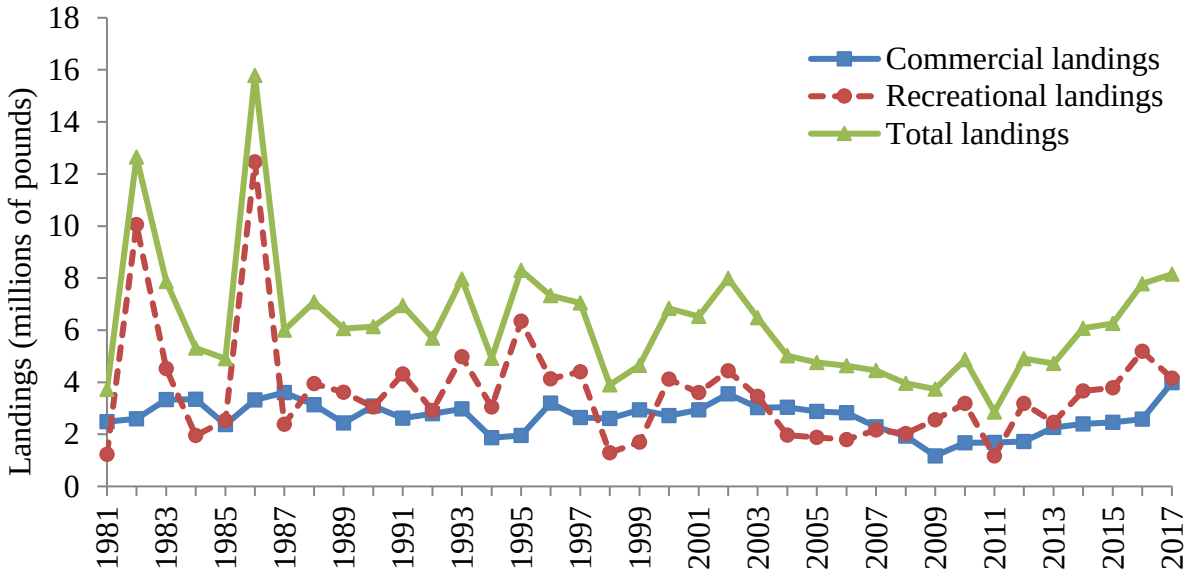

Figure 3: Commercial and recreational black sea bass landings in millions of pounds from Maine through Cape Hatteras, North Carolina, 1981-2017.[6,7] Recreational landings prior to 2004 include all North Carolina landings.

4. Commercial Black Sea Bass Measures and Fishery Performance

Commercial landings of black sea bass peaked in 2017 at 3.99 million pounds, and reached a low of 1.18 million pounds in 2009 (Figure 3). The 3.99 million pounds of black sea bass landed in 2017 corresponded to approximately 97% of the commercial.[7]

A moratorium permit is required to fish commercially for black sea bass in federal waters. In 2017, 679 federal commercial black sea bass permits were issued.[8]

The minimum commercial size limit for black sea bass of 11 inches total length has been in place since 2002. The Commission divides the commercial quota among states based on the allocation percentages in Table 2. States set measures to achieve their state-specific commercial quotas.

Vessel Trip Report (VTR) data for 2017 indicate that 73% of the black sea bass caught by federal commercial permit holders from Maine to North Carolina was caught with bottom otter trawl gear. About 16% were caught with fish pots and traps, 5% in offshore lobster traps, and 4% with hand lines. Other gear types accounted for just over 1% each of total commercial catch.[9]

Any federally-permitted vessel which uses otter trawl gear and catches more than 500 pounds of black sea bass from January through March, or more than 100 pounds from April through December, must use nets with a minimum mesh size of 4.5-inch diamond mesh applied throughout the codend for at least 75 continuous meshes forward of the end of the net. Pots and traps used to commercially harvest black sea bass must have two escape vents with degradable hinges in the section known as the parlor. The escape vents must measure 1.375 inches by 5.75 inches if rectangular, 2 inches by 2 inches if square, or have a diameter of 2.5 inches if circular.

According to VTR data, statistical area 616 was responsible for the largest percentage of commercial black sea bass catch (landings and discards) in 2017 (Table 3, Figure 4). Statistical area 539 accounted for only 5% of 2017 catch, but had the highest number of trips that caught black sea bass (2,148 trips), accounting for 19% of all trips.[9]

Total black sea bass ex-vessel value (adjusted to 2017 dollars to account for inflation) from Maine to North Carolina ranged from a low of $3.48 million in 1994 to a high in 2017 with an ex-vessel vlaue of of $12.24 million. Black sea bass reached its lowest adjusted average annual price per pound in 1996, at $1.73 ($1.14 in 2017 dollars), and its highest adjusted average annual price per pound in 2016, at $3.73 (in 2017 dollars; Figure 5).[7]

In 2017, 3.99 million pounds of black sea bass were landed in the commercial fishery, generating $12.24 million in revenues at an average price of $3.07 per pound (Figure 5). Landings and ex-vessel value increased from 2016, while the price per pound decreased from 2016.[7]

At least 100,000 pounds of black sea bass were landed in each of nine ports in seven states from Maine through North Carolina in 2017. These nine ports accounted for approximately 65% of all commercial black sea bass landings in 2017 (Table 4).[7] Detailed community profiles developed by the NEFSC Social Science Branch can be found at www.mafmc.org/communities/.

A total of 204 federally-permitted dealers from Maine through North Carolina purchased black sea bass in 2017. More dealers bought black sea bass in New York than in any other state (Table 5).[6]

Table 2: Allocation of commercial black sea bass quota among states established in the Commission's FMP.

State	Allocation (percent)
Maine	0.5
New Hampshire	0.5
Massachusetts	13.0
Rhode Island	11.0
Connecticut	1.0
New York	7.0
New Jersey	20.0
Delaware	5.0
Maryland	11.0
Virginia	20.0
North Carolina	11.0
Total	100

Table 3: Statistical areas that accounted for at least 5% of the total commercial black sea bass catch in 2017, with associated number of trips.9

Statistical Area	Percent of 2016 Commercial Black Sea Bass Catch	Number of Trips
616	35%	677
613	12%	1,205
615	9%	211
537	8%	1,081
621	8%	353
612	7%	696
539	5%	2,148

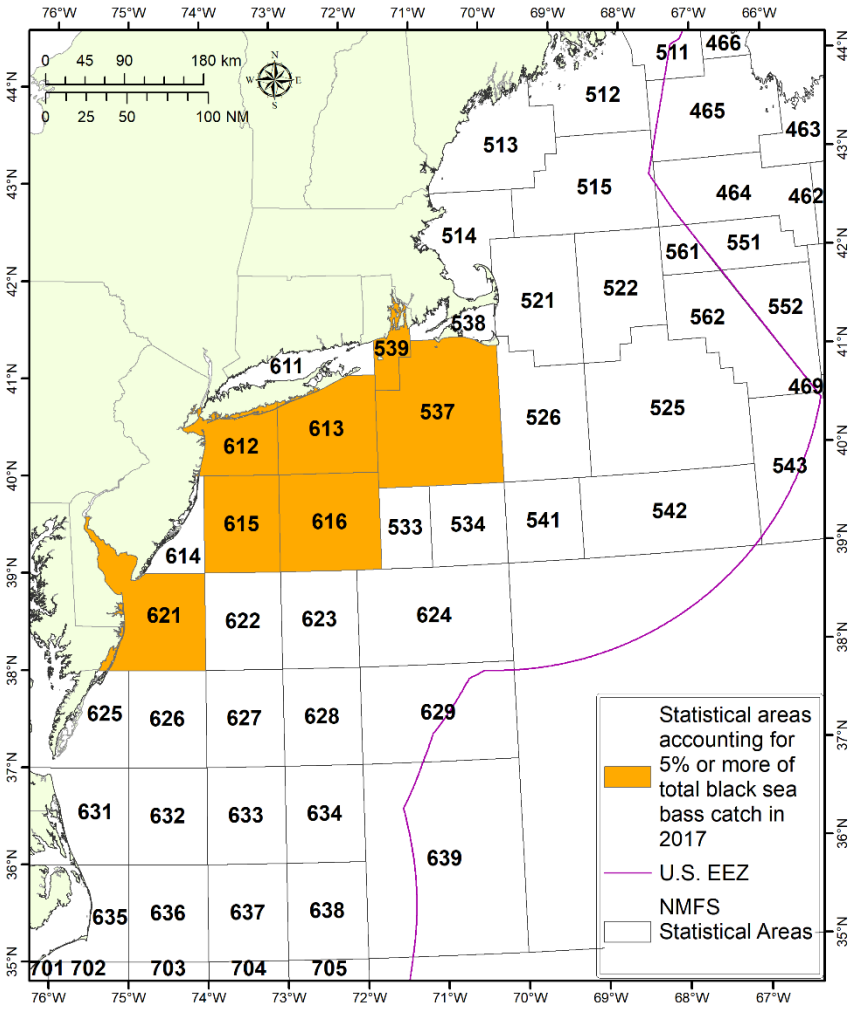

Figure 4: NMFS Statistical Areas, highlighting those that each accounted for more than 5% of the commercial black sea bass catch in 2017.[9]

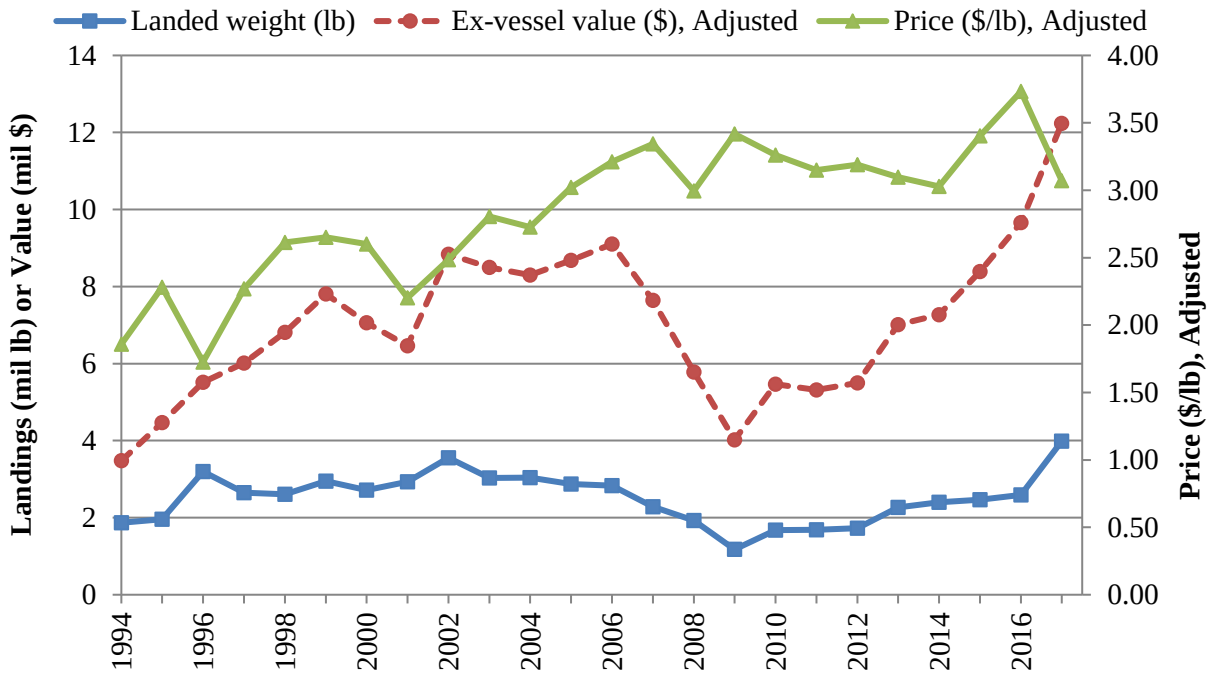

Figure 5: Landings, ex-vessel value, and price for black sea bass, from Maine through North Carolina, 1994-2017. Ex-vessel value and price are adjusted to real 2017 dollars.[7]

Table 4: Ports reporting at least 100,000 pounds of black sea bass landings in 2017 and associated number of vessels and percentage of total commercial landings.[7]

Port name	Pounds of black sea bass landed	% of total commercial black sea bass landed	Number of vessels landing black sea bass
PT. PLEASANT, NJ	590,917	14.8	48
HAMPTON, VA	398,221	10.0	38
POINT JUDITH, RI	344,849	8.7	148
OCEAN CITY, MD	332,940	8.4	8
BEAUFORT, NC	219,199	5.5	51
CHINCOTEAGUE, VA	203,888	5.1	9
NEW BEDFORD, MA	198,447	5.0	58
CAPE MAY, NJ	168,011	4.2	29
MONTAUK, NY	152,969	3.8	104

Table 5: Dealers, by state, which reported purchases of black sea bass in 2017.[7]

State	MA	RI	CT	NY	NJ	DE	MD	VA	NC
Number of dealers	29	29	14	45	33	4	6	16	28

5. Recreational Black Sea Bass Measures and Fishery Performance

Black sea bass support a sizable recreational fishery in the Mid-Atlantic region. Most recreational black sea bass landings occur in state waters when the fish migrate inshore during the summer months.

The Council develops coast-wide regulations for the recreational black sea bass fishery in federal waters, including a minimum size, a possession limit, and open seasons (Table 6). The Commission and member states develop recreational measures in state waters (Table 7 and Table 8).

Between 1981 and 2017, recreational catch and harvest were highest in 1986, when an estimated 29.17 million black sea bass were caught and 21.90 million black sea bass (about 12.46 million pounds) were harvested from Maine through North Carolina. Recreational catch reached a low of 3.43 million fish in 1984. Recreational harvest was lowest in 2011, when 0.82 million fish (about 1.17 million pounds) were landed from Maine through Cape Hatteras, North Carolina (Table 9). In 2017, an estimated 2.21 million black sea bass, at about 4.16 million pounds and approximately 97% of the 2017 RHL, were harvested by recreational anglers from Maine through Cape Hatteras, North Carolina (Table 1).[5]

For-hire vessels carrying passengers in federal waters must obtain a federal party/charter permit. In 2017, 814 party and charter boats held federal recreational black sea bass permits, an increase from the 749 party/charter permits issued in 2016. Many of these vessels also hold recreational permits for summer flounder and scup.[8]

In 2017, about 50% of black sea bass landed by recreational fishermen were caught in state waters, and about 50% in federal waters (Table 10). Most landings occurred in New Jersey, New York, and Connecticut. These three states accounted for about 72% of all recreational harvest from Maine to Cape Hatteras, North Carolina in 2017 (Table 11).[5]

About 78% of recreational black sea bass landings in 2017 were caught by anglers fishing on private or rental boats, about 21% from anglers aboard party or charter boats, and 1% from shore (Table 12).[6]

Table 6: Federal recreational measures for black sea bass, north of Cape Hatteras, NC, 2007 through 2018.

Measure	2007-2008	2009	2010-2011	2012	2013	2014	2015-2017	2018
Min. size (inches, total length)	12	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Possession limit	25	25	25	25	20	15	15	15
Open season	1/1-12/31	1/1-10/5	5/22-10/11 and 11/1-12/31	5/19-10/14 and 11/1-12/31	5/19-10/14 and 11/1-12/31	5/19-9/18 and 10/18-12/31	5/15-9/21 and 10/22-12/31	5/15-12/31

Table 7: State waters black sea bass recreational fishing measures in 2017.

State	Minimum Size (inches)	Possession Limit	Open Season
Maine	13	10 fish	May 19-September 21; October 18-December 31
New Hampshire	13	10 fish	January 1-December 31
Massachusetts	15	5 fish	May 21 - August 31
Rhode Island	15	3 fish	May 25-August 31
		7 fish	September 1-21; October 22-December 31
Connecticut (Private & Shore)	15	5 fish	May 1-December 31
Connecticut Authorized Party/Charter Vessels		8 fish	May 1-December 31
New York	15	3 fish	June 27-August 31
		8 fish	September 1-October 31
		10 fish	November 1-December 31
New Jersey	12.5	10 fish	May 26-June 18
		2 fish	July 1-August 31
		15 fish	October 22-December 31
Delaware, Maryland, Virginia, and North Carolina, North of Cape Hatteras (N of 35° 15'N)	12.5	15 fish	May 15-September 21; October 22-December 31

Table 8: State waters black sea bass recreational fishing measures in 2018.

State	Minimum Size (inches)	Possession Limit	Open Season
Maine	13	10 fish	May 19-September 21; October 18-December 31
New Hampshire	13	10 fish	January 1-December 31
Massachusetts	15	5 fish	May 19-September 12
Rhode Island	15	3 fish	June 24 - August 31
		7 fish	September 1 - December 31
Connecticut (Private & Shore)	15	5 fish	May 19-December 31
Connecticut Authorized Party/Charter Vessels	15	5 fish	May 19-August 31
		7 fish	September 1-December 31
New York*	15	3 fish	June 23-August 31
		7 fish	September 1-December 31
New Jersey	12.5	10 fish	May 15-June 22
	12.5	2 fish	July 1-August 31
	12.5	10 fish	October 8 - October 31
	13	5 fish	November 1 - December 31
Delaware, Maryland, Virginia, and North Carolina, North of Cape Hatteras (N of 35° 15'N)	12.5	15 fish	May 15-December 31

*New York is in the process of promulgating its measures, which should be finalized in June.

Table 9: Estimated recreational black sea bass catch and harvest from 1981 through 2017. Values from 2004 through 2017 are for Maine through Cape Hatteras, North Carolina. Values prior to 2004 include all of North Carolina.[6]

Year	Catch (Millions of fish)	Harvest (Millions of fish)	Harvest (Millions of pounds)	% of catch retained
1981	5.30	2.73	1.23	52%
1982	11.62	10.25	10.05	88%
1983	8.71	5.63	4.53	65%
1984	4.33	2.49	1.96	58%
1985	7.13	4.22	2.54	59%
1986	29.17	21.90	12.46	75%
1987	5.91	3.47	2.39	59%
1988	9.36	4.06	3.94	43%
1989	7.00	4.65	3.62	66%
1990	9.62	4.27	3.05	44%
1991	11.22	5.46	4.32	49%
1992	8.30	3.87	2.91	47%
1993	9.45	6.20	4.98	66%
1994	7.69	3.57	3.05	46%
1995	14.48	6.89	6.34	48%
1996	8.44	3.76	4.13	45%
1997	11.09	4.87	4.40	44%
1998	5.70	1.26	1.29	22%
1999	7.76	1.41	1.70	18%
2000	17.67	3.76	4.12	21%
2001	14.63	3.01	3.60	21%
2002	15.08	3.42	4.44	23%
2003	12.65	3.39	3.45	27%
2004	7.24	1.53	1.97	21%
2005	7.04	1.26	1.88	18%
2006	7.60	1.29	1.80	17%
2007	8.73	1.53	2.17	18%
2008	10.65	1.29	2.03	12%
2009	9.22	1.81	2.56	20%
2010	9.96	2.21	3.19	22%
2011	4.74	0.82	1.17	17%
2012	12.54	1.87	3.18	15%
2013	9.81	1.28	2.46	13%
2014	10.87	2.12	3.67	19%
2015	9.43	2.21	3.79	23%
2016	14.14	2.54	5.19	18%
2017	15.03	2.21	4.16	15%

Table 10: Estimated percentage of black sea bass recreational landings (in numbers of fish) in state and federal waters, from Maine through North Carolina, 2008 through 2017.[6]

Year	State waters	Federal waters
2008	60.3%	39.7%
2009	67.5%	32.5%
2010	72.1%	27.9%
2011	63.8%	36.2%
2012	72.6%	27.4%
2013	66.6%	33.4%
2014	62.5%	37.5%
2015	67.3%	32.7%
2016	64.6%	35.4%
2017	50.0%	50.0%
2008-2017 average	**64.7%**	**35.3%**
2015-2017 average	**60.6%**	**39.4%**

Table 11: State-by-state contribution (as a percentage) to total recreational harvest of black sea bass (in number of fish), Maine through Cape Hatteras, North Carolina, in 2016 and 2017.[6]

State	2016	2017
Maine	0.0%	0.0%
New Hampshire	0.0%	0.0%
Massachusetts	15.4%	10.6%
Rhode Island	10.0%	8.7%
Connecticut	17.1%	17.9%
New York	40.6%	16.3%
New Jersey	11.6%	38.1%
Delaware	1.0%	2.7%
Maryland	3.1%	3.3%
Virginia	1.1%	1.7%
North Carolina	0.0%	0.8%

Table 12: The number of black sea bass landed (in numbers of fish) by recreational fishing mode, Maine through North Carolina, 1989-2017.[6]

Year	Shore	Party/charter	Private/rental
1989	5.12%	42.84%	52.04%
1990	6.78%	53.15%	40.07%
1991	4.59%	47.38%	48.03%
1992	1.17%	52.81%	46.02%
1993	0.88%	73.91%	25.21%
1994	6.81%	56.17%	37.01%
1995	4.01%	75.47%	20.53%
1996	1.87%	69.91%	28.21%
1997	0.17%	81.16%	18.67%
1998	0.56%	61.78%	37.65%
1999	1.36%	44.01%	54.63%
2000	4.73%	47.87%	47.40%
2001	0.47%	60.78%	38.76%
2002	0.49%	60.39%	39.12%
2003	0.32%	61.11%	38.57%
2004	0.49%	36.28%	63.23%
2005	0.88%	40.71%	58.41%
2006	3.52%	52.48%	44.00%
2007	0.61%	55.83%	43.56%
2008	0.70%	35.75%	63.55%
2009	1.26%	23.16%	75.58%
2010	0.26%	22.25%	77.49%
2011	0.93%	35.29%	63.78%
2012	0.33%	36.06%	63.60%
2013	0.93%	20.84%	78.24%
2014	0.92%	35.85%	63.24%
2015	0.14%	41.01%	58.84%
2016	2.74%	18.29%	78.97%
2017	0.88%	21.30%	77.82%
2015-2017 average	**1.25%**	**26.87%**	**71.88%**

References

[1] Drohan, A.F., J. P. Manderson, D. B. Packer. 2007. Essential fish habitat source document: black sea bass, *Centropristis striata*, life history and habitat characteristics, 2nd edition. NOAA Technical Memorandum NMFS NE 200; 68 p.

[2] Blaylock, J. and G.R. Shepherd. 2016. Evaluating the vulnerability of an atypical protogynous hermaphrodite to fishery exploitation: results from a population model for black sea bass (*Centropristis striata*). Fishery Bulletin 114(4): 476-489.

[3] 62nd Northeast Regional Stock Assessment Workshop (62nd SAW) Assessment Summary Report at http://www.nefsc.noaa.gov/publications/crd/crd1701/crd1701.pdf.

[4] Northeast Fisheries Science Center. 2017. 62nd Northeast Regional Stock Assessment Workshop (62nd SAW) Assessment Report. US Dept. Commerce., Northeast Fish Sci Cent Ref Doc. 17-03; 822 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at http://nefsc.noaa.gov/publications/.

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[6] Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division. Accessed May 15, 2017. Available at: http://www.st.nmfs.noaa.gov/recreational-fisheries/index.

[7] Unpublished NMFS dealer data.

[8] Unpublished NMFS permit data.

[9] Unpublished NMFS Vessel Trip Report (VTR) data.