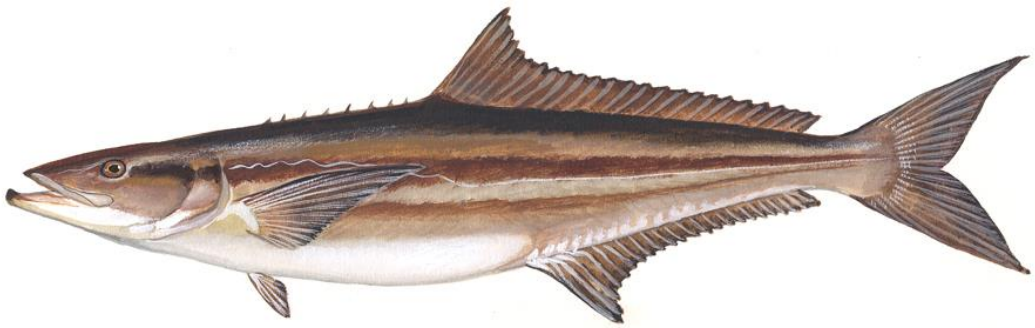
ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR

ATLANTIC COBIA
(*Rachycentron canadum*)

2019 FISHING YEAR



Prepared by the Plan Review Team

Approved October 2020
Updated August 2022 (Table 2)

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

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I. Status of the Fishery Management Plan

Date of FMP Approval: Original FMP – November 2017

Amendments: Amendment 1 – August 2019

Management Areas: The distribution of the Atlantic stock of cobia from Georgia through New York

Active Boards/Committees: South Atlantic State/Federal Fisheries Management Board; Cobia Technical Committee, Plan Development Team, and Plan Review Team; South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted an interstate Fishery Management Plan (FMP) for the Atlantic Migratory Group of cobia (Atlantic cobia) in 2017 (ASMFC, 2017). Prior to the FMP, federal management was through the South Atlantic Fishery Management Council's (SAFMC) Fishery Management Plan for Coastal Migratory Pelagic Resources (CMP FMP), while New York, New Jersey, Delaware, Virginia, North Carolina and South Carolina had regulations for their respective state waters.

The FMP established a complementary management approach between the ASMFC and SAFMC. Under the ASMFC, Atlantic cobia are managed as part of the South Atlantic State/Federal Fisheries Management Board (Board). Through the FMP, regulations for states with a declared interest were required to reflect several measures established federally through the CMP FMP.

In March, 2019, Regulatory Amendment 31 to the CMP FMP became effective (SAFMC, 2018). This removed Atlantic cobia from the CMP FMP, resulting in management solely through the ASMFC.

In August, 2019, the Board approved Amendment 1 to reflect removal of Atlantic cobia from the CMP FMP, assume management responsibilities previously accomplished through the SAFMC and CMP FMP, and establish recommendations for measures in federal waters. Amendment 1 stated requirements are to be implemented by July, 2020.

Amendment 1 maintains many regulations of the original Commission FMP and previous CMP FMP. These include a 36-inch fork length (or 40 inch total length) recreational minimum size limit, 1 fish per person recreational bag limit, a recreational daily vessel limit not to exceed 6 fish per vessel, a 33-inch fork length (or 37-inch total length) commercial minimum size limit, and a commercial possession limit of 2 cobia per person not to exceed 6 cobia per vessel.

There are four plan objectives:

1) Provide a flexible management system to address future changes in resource abundance, scientific information, and fishing patterns among user groups or areas.
2) Promote cooperative collection of biological, economic, and social data required to effectively monitor and assess the status of the cobia resource and evaluate management efforts.
3) Manage the cobia fishery to protect both young individuals and established breeding stock.

4) Develop research priorities that will further refine the cobia management program to maximize the biological, social, and economic benefits derived from the cobia population.

In February, 2020, the Board approved an annual total harvest quota of 80,112 fish for 2020-2022, based on results from the Southeast Data, Assessment, and Review (SEDAR) 58 stock assessment for Atlantic cobia. However, states with commercial harvest had an agreement to harvest a smaller portion of that amount in 2020. SEDAR 58 used updated recreational catch estimates from the Marine Recreational Information Program's (MRIP) 2018 transition and calibration to the mail-based Fishing Effort Survey effort estimates, which replaced those of the Coastal Household Telephone Survey. All recreational numbers shown in this and future FMP Reviews are based on the FES estimates.

Given the increased recreational catch estimates used in the SEDAR 58 assessment, the total annual quota approved by the Board also increased, resulting in increases to both the recreational and commercial quotas. As this increase in recreational harvest did not truly reflect a change in previous effort, only the estimate of that effort, Addendum I to Amendment 1 was initiated to reconsider the percent allocations to the commercial and recreational sectors to better reflect the observed harvest. The increase in commercial quota also highlighted the need for potential changes to the commercial trigger percentage calculation. The current calculation method is dependent on recent harvest, and, if the quota increases above recent harvest levels or the harvest has been very low, the commercial trigger cannot be calculated. Data from SEDAR 58 also indicated that changes may need to be made to the management of both commercial and recreational *de minimis* states to address the portion of quota set aside for *de minimis* states, as well as accommodate the potential reproductive benefit from a greater minimum size limit and limit regulatory inconsistency among states.

II. Status of the Stock

SEDAR 58

In 2020, the Board approved the SEDAR 58 Atlantic Cobia benchmark assessment for management use which continued to use the Beaufort Assessment Model (BAM), a forward-projecting statistical catch-at-age model used in the prior assessment, SEDAR 28 (SEDAR 2013). SEDAR 58 provided new reference points and determined that the stock is not overfished and overfishing is not occurring (Figures 1 and 2). This assessment used the recalibrated recreational catch data from MRIP, which yielded much higher estimates the biomass and spawning stock biomass estimates as compared to SEDAR 28 (Figure 3). Even with the large changes in biomass estimates, the trends of abundance, recruitment, and relative status were very similar between the two assessments. Stock structure also remained unchanged from the SEDAR 28 assessment which established the stock boundary between Atlantic and Gulf of Mexico cobia at the FL/GA border with the Atlantic stock extending northward to New York.

Updated Reference Points

The assessment proposed updated reference points of $F_{40\%}$ and $SSB_{F40\%}$ as the target reference points (Figures 4 and 5). The reference points were selected at the fishing rate and SSB that allows the population to reach 40% of the maximum spawning potential the stock would have obtained in

the absence of harvest. These reference points serve as proxies for maximum sustainable yield-derived relationships due to insufficient data for cobia.

Updated Maturity
Reproductive data from SEDAR 58 indicated that there is potential reproductive benefit for using a larger minimum size than 29 inches fork length. An increased minimum size would allow more female cobia to reach maturity before being susceptible to harvest.

Status of the Stock and Fishery
Spawning stock biomass showed little overall trend throughout the estimated time series, but the terminal year is the lowest in the time series. Age structure estimated by the base run indicated a slight decline in the number of younger fish in the last decade, but the rest of the age structure was above the expected values in 2017. The estimated fishing mortality rates have generally increased through the assessment time frame, peaking in 1996, with the recreational fleet as the largest contributor to total F ($F_{2015\text{-}2017}/F_{40\%}$ = 0.29).

III. Status of the Fishery

This report includes the updated recreational estimates from the Marine Recreational Information Program following the transition to the mail-based Fishing Effort Survey (FES) on July 1, 2018. Figure 6 shows coastwide recreational landings including estimates using both the previous Coastal Household Telephone Survey (CHTS) and FES calibration for comparison. Past recreational estimates have been calibrated to the FES and, therefore, are different from those shown in FMP Reviews and state compliance reports prior to 2019. Previous management (prior to the new quota specification for 2020) used recreational limits and targets based on the CHTS data, and numbers presented in this report reflect the new MRIP numbers. Estimates for 2019 cannot be compared to management in previous years due to changes in MRIP but will be revised in future FMP reviews.

Total Atlantic cobia landings are estimated at 1.9 million pounds in 2019. (Figure 7, Tables 2 and 3). The commercial and recreational fisheries harvested 3% and 97% of the 2019 total, respectively. Commercial landings of Atlantic cobia in 2019 span from Rhode Island through Georgia (Table 2). Coastwide commercial landings show an increasing trend since low harvests in the 1970s and early 1980s but comprise a small portion of the total harvest due, in part, to a current 8% allocation of the total annual catch limit (Figure 7). Coastwide cobia commercial landings in 2019 were estimated at 60,592 pounds. The commercial fishery was projected to meet the ACL and was closed on September 4, 2019, for the remainder of the year. Virginia (51%) and North Carolina (35%) harvested the majority of the commercial landings (Table 2).

Recreational harvests have fluctuated widely throughout the time series, often through rapid increases and declines. Average harvests for the time series are 991,652 pounds (Figure 7, Table 3) and 35,262 fish (Figure 8, Table 4). This fishery has grown noticeably over the time series, with average harvests over the last 10 years of 1,830,682 pounds and 63,839 fish. The 2019 recreational

harvest was 1.9 million pounds or 67,923 fish. Virginia (83% of pounds, 82% of fish) and North Carolina (13% of numbers, 15% of fish) harvested the majority of recreational landings by pounds and number of fish. Average weight (recreational harvest in pounds divided by recreational harvest in numbers) in 2019 was 28 pounds per fish.

Recreational releases of live fish have generally increased throughout the time series (Figure 8, Table 5). In 2019, 301,536 recreationally-caught fish were released. Increased recreational releases over the last four years are likely attributable to a combination of management actions, including establishment of an ACL, closures of the recreational fishery in federal waters, and newly-introduced state regulations.

IV. Status of Assessment Advice

Current stock status information comes from SEDAR 58 (SEDAR, 2020), which determined the stock is not overfished and overfishing is not occurring. Results of this assessment were approved for management use by the Board at their February 2020 meeting, and, as such, have been incorporated into ASMFC's FMP.

The stock assessment could be improved by developing a fishery-independent sampling program for abundance of cobia and other coastal migratory pelagic species. The currently used fishery-dependent index cause notable uncertainty in part due to the lack of an effective sampling methodology. In addition, due to federal water closures, the index could only be calculated through 2015. The assessment could also benefit from improved characterization of age, reproductive, genetic, and migratory characteristics, tag-based information on natural mortality, and more precise recreational catch estimates.

V. Status of Research and Monitoring

There are no monitoring or research programs required annually of the states except for the submission of a compliance report. The following fishery-dependent (other than catch and effort data) and fishery-independent monitoring programs were reported in the 2019 reports.

<u>Fishery-Dependent Monitoring</u>

- Maryland DNR – Commercial pound net survey in lower Chesapeake Bay and Potomac River from May through September. 6 fish since 1993 (2019: 1 fish, 1197 mm total length (TL)).
- Virginia MRC – Recreational cobia permit that requires reporting of cobia trips and catch to renew harvest in the following year also collects weight and length information. In addition, the Virginia Biological Sampling Program collects donated carcasses from both commercial and recreational fisheries. In 2019 they collected length (n=439), weight (n=51), sex (n=431), and age (n=432) from the data.
- North Carolina DMF – Commercial fishery-dependent sampling, 20 lengths in 2019. MRIP length sampling, 30 lengths in 2019. Recreational Carcass Collection Program, 42 lengths in 2019.
- South Carolina DNR – In 1993, the SCDNR initiated a mandatory trip-level logbook reporting system for all charter vessels to collect basic catch and effort data. The charter boat logbook

reports include: date, number of fishermen, hours fished, fishing locale (inshore, 0-3 miles, and > 3 miles offshore), fishing location (based on a 10 x 10 mile grid map), fishing method, target species, species caught, catch (number landed versus number released by fish species), and estimated landed pounds per vessel per trip. There were 1,252 cobia reported in 2019.

- Georgia CRD – Collected age, length, and sex data through the Marine Sportfish Carcass Recovery Project (2019: 0 cobia).
- NMFS – Collected recreational catch, harvest, release, and effort data, as well as length measurements via MRIP.

Fishery-Independent Monitoring

- New Jersey DEP – Ocean Trawl Survey: 31-year time series (1988-2019), total of 22 cobia caught (2019: 1 fish, 1.05 lb).
- Delaware DFW – No cobia caught in either finfish trawl survey (16ft or 30ft) or any other fishery-independent sampling.
- Maryland DNR –Coastal Bays Surveys since 1972; 3 cobia caught in beach seine and 5 in otter trawl for entire time series (0 cobia in either gear in 2019).
- South Carolina DNR – Estuarine trammel net survey (1994-2019) has caught a total of 17 cobia. SEAMAP trawl survey (1989-2019) has caught a total of 354 cobia, with 1.6% positive tows.
- Georgia CRD – Marine Sportfish Population Health Survey, includes summer gillnet survey and fall trammel net survey, 0 cobia caught in 2019.

VI. Status of Management Measures and Issues

Fishery Management Plan

Due to revised MRIP numbers, commercial and recreational quota allocations are currently being reconsidered through Addendum I. Current harvest using the recalculated values cannot be directly compared to previously set ACL. This is most evident with estimated recreational harvest and the RHL set for the 2018-2020 time period.

In 2020, Virginia updated their cobia regulation to provide language clarification and clarification for their cobia recreational and commercial harvest reporting.

North Carolina increased the minimum size limit for the 2020 commercial fishery season from 33 in FL to 36 in FL to have a uniform size limit across recreational and commercial fisheries.

De Minimis

The FMP requires adherence to state harvest targets, allocated to non-*de minimis* states from a RHL. The RHL is derived from the CMP FMP's former recreational ACL. One percent of the recreational ACL is designated to account for harvest in *de minimis* states.

Delaware established regulations to put them in compliance with the ISFMP in May 2020.

The FMP allows states to request *de minimis* status if their recreational harvests (in pounds) in two of the previous three years are less than 1% of annual coastwide recreational landings during that time period. If a state qualifies for *de minimis*, the state may choose to match all FMP-related recreational management measures (including seasons and vessel limits) implemented by an adjacent non-*de minimis* state (or the nearest non-*de minimis* state if none are adjacent) or the state may choose to limit its recreational fishery to 1 fish per vessel per trip with a minimum size of 29 inches fork length (or a total length equivalent) with no seasonal restrictions. Commercial regulations in *de minimis* states are also limited to a minimum size of 33 in FL with 2 fish per person for a total of 6 fish per vessel.

New Jersey, Delaware, and Maryland requested recreational *de minimis* status through the annual reporting process. All of these states qualify for *de minimis* status.
New Jersey, Delaware, Maryland, and Georgia, requested *de minimis* status for commercial fisheries through the annual reporting process. All of these states qualify for *de minimis* status.

VII. Implementation of FMP Compliance Requirements for 2019

The PRT finds that all states have implemented the requirements of the Fishery Management Plan.

VIII. Recommendations of the Plan Review Team

Management
The PRT recommends that the Board approve the 2020 FMP Review, state compliance, and *de minimis* requests from New Jersey, Delaware, Maryland, and Georgia.

Research

The following are important research recommendations from the PRT:

<u>Biological</u>

1) Obtain more precise and timely estimates of harvest from the cobia recreational fishery.

2) Investigate release mortality and fishing mortality within the commercial and recreational fisheries along the US Atlantic coast.

3) Continue to collect and analyze current life history data from fishery independent and dependent programs, including full size, age, maturity, histology workups and information on spawning season timing and duration. Any additional data that can be collected on any life stages of cobia would be highly beneficial.

4) Increase spatial and temporal coverage of age samples collected regularly in fishery dependent and independent sources. Prioritize collection of age data from fishery dependent and independent sources in all states.

5) Collect genetic material to continue to assess the stock identification and any Distinct Population Segments that may exist within the management unit relative to recommendations made by the SEDAR 58 Stock ID Process.

6) Conduct a high reward tagging program to obtain improved return rate estimates. Continue and expand current tagging programs to obtain mortality and growth information and movement at size data.

7) Conduct studies to estimate fecundity-at-age coastwide and to estimate batch fecundity.

8) Obtain better estimates of bycatch and mortality of cobia in other fisheries, especially juvenile fish.

9) Obtain estimates of selectivity-at-age for cobia through observer programs or tagging studies.

10) Define, develop, and monitor adult and juvenile abundance estimates through the expansion of current or development of new fishery independent surveys.

Social

1) Using social impact analysis approaches such as updating applicable recreational and commercial fisheries community profiles and measures of social vulnerability (See Jepson & Colburn, 2013), evaluate the local and regional dependency on cobia resources managed by the Commission.

Economic

1) Obtain better data (e.g. more comprehensive and timely) to estimate the annual economic impacts, net benefits, and economic contributions of recreational and commercial Atlantic cobia fishing on coastal communities and regions.

2) Obtain cost and expenditure data for recreational fishing trips targeting cobia by fishing mode, for different states, and for anglers returning to private sites, who would not be sampled by the MRIP.

3) Estimate willingness-to-pay associated with recreational cobia angling.

Habitat

1) Expand existing fishery independent surveys in time and space to better define and cover cobia habitats.

2) Conduct otolith microchemistry studies to identify regional recruitment contributions.

3) Conduct new and expand existing satellite tagging programs to help identify spawning and juvenile habitat use and regional recruitment sources.

IX. References

ASMFC. 2017. Interstate Fishery Management Plan for Atlantic Migratory Group Cobia. ASMFC, Arlington, VA. 85 p.

SAFMC. 2018. Amendment 31 to the Fishery Management Plan for Coastal Migratory Pelagics Resources in the Gulf of Mexico and Atlantic Region. NOAA Award # FNA10NMF441001. Charleston, SC. 209 pp.

SEDAR. 2013. SEDAR 28 – South Atlantic Cobia Stock Assessment Report. SEDAR, North Charleston SC. 420 pp. available online at: http://www.sefsc.noaa.gov/sedar/Sedar_Workshops.jsp?WorkshopNum=28

SEDAR. 2020. SEDAR 58 – Atlantic Cobia Stock Assessment Report. SEDAR, North Charleston SC. 500 pp. available online at: http://sedarweb.org/sedar-58

X. Figures

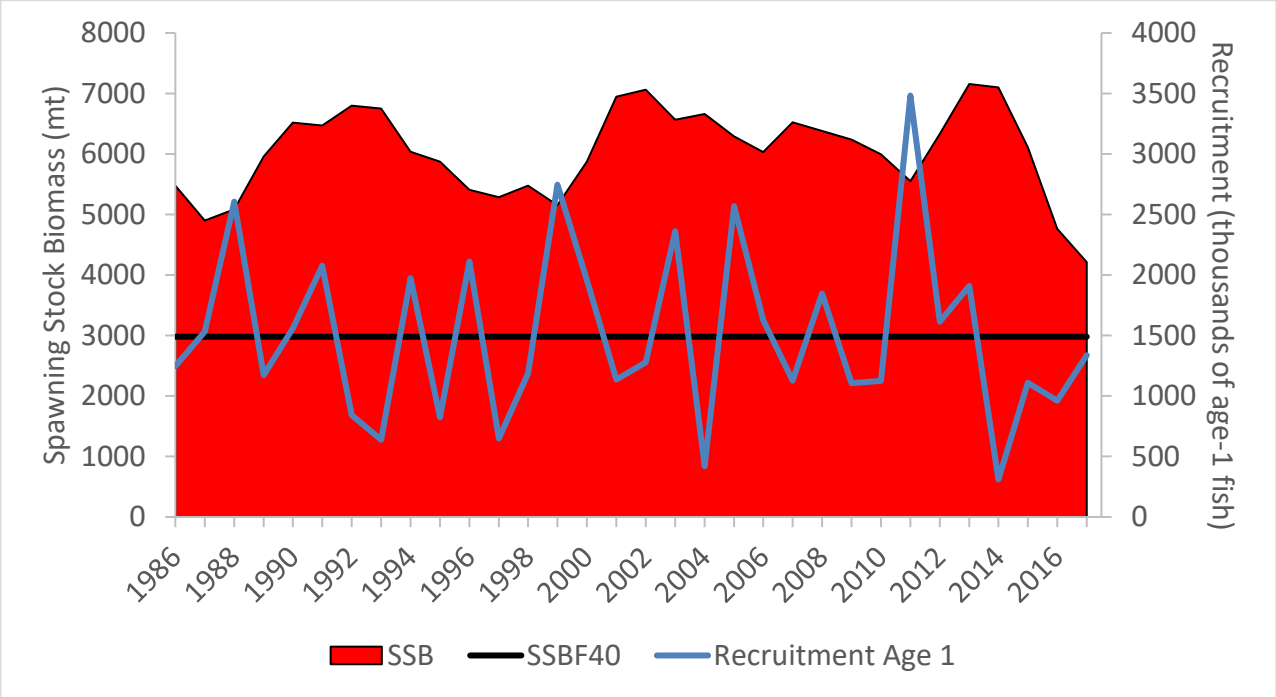

Figure 1. Atlantic Cobia spawning stock biomass (SSB) and recruitment of year 1 fish. (SEDAR, 2020)

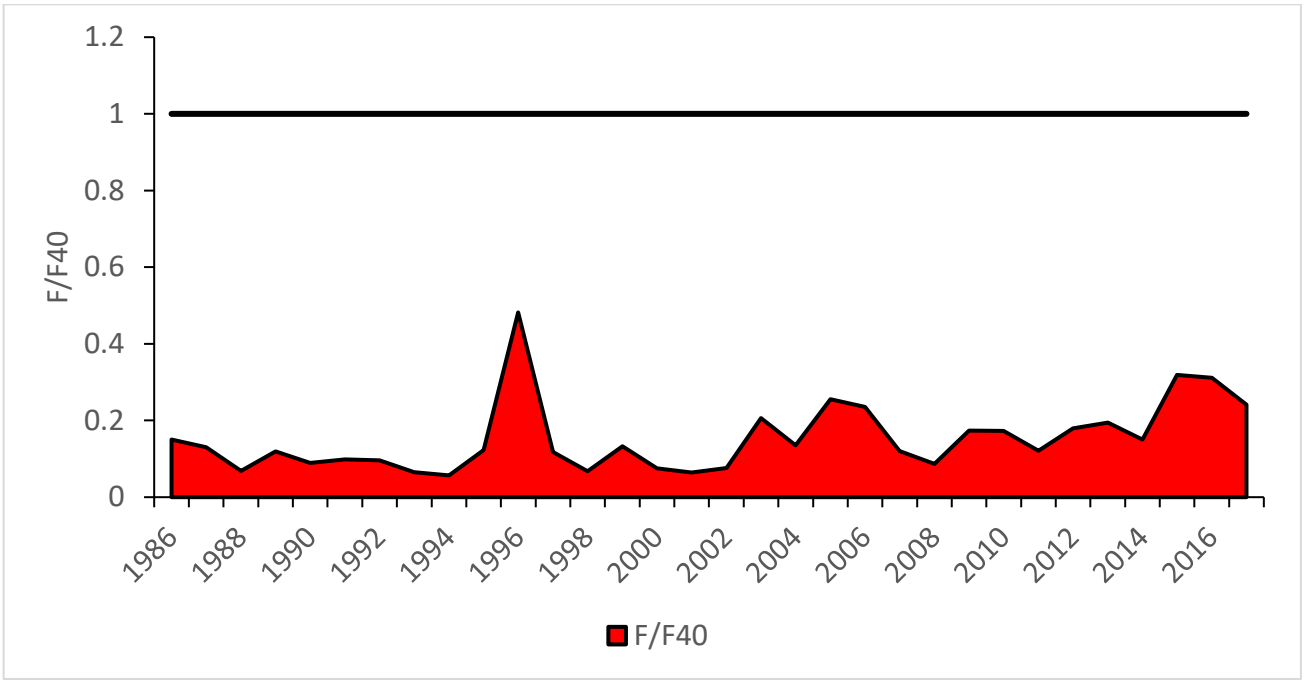

Figure 2. Atlantic Cobia fishing mortality (F) relative to the F40 reference point from 1986-2017. (SEDAR, 2020)

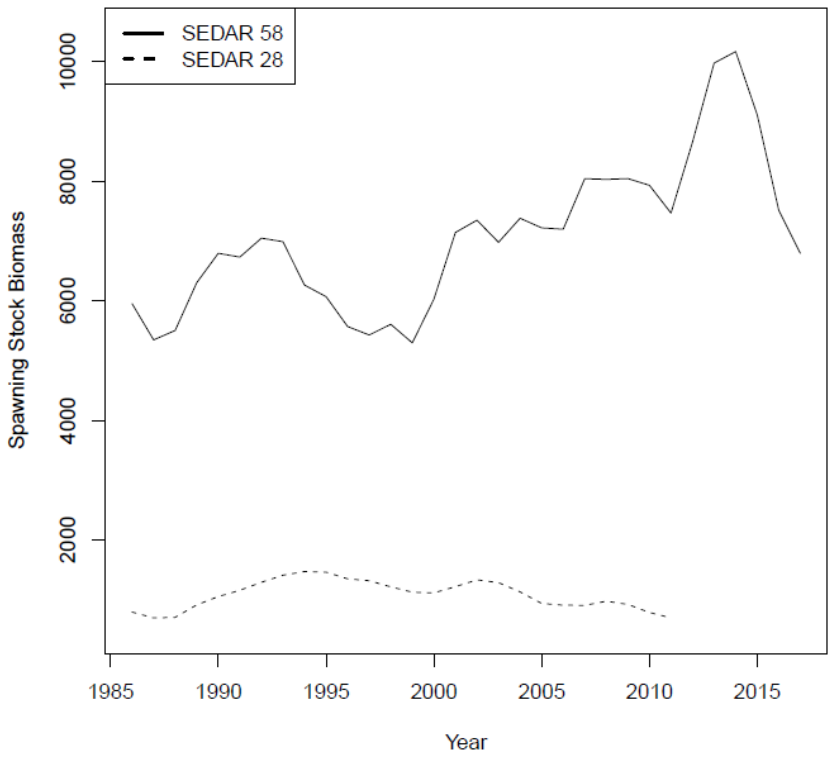

Figure 3. Comparing spawning stock biomass from the current assessment (SEDAR 58) to the last assessment (SEDAR 28). (SEDAR, 2020)

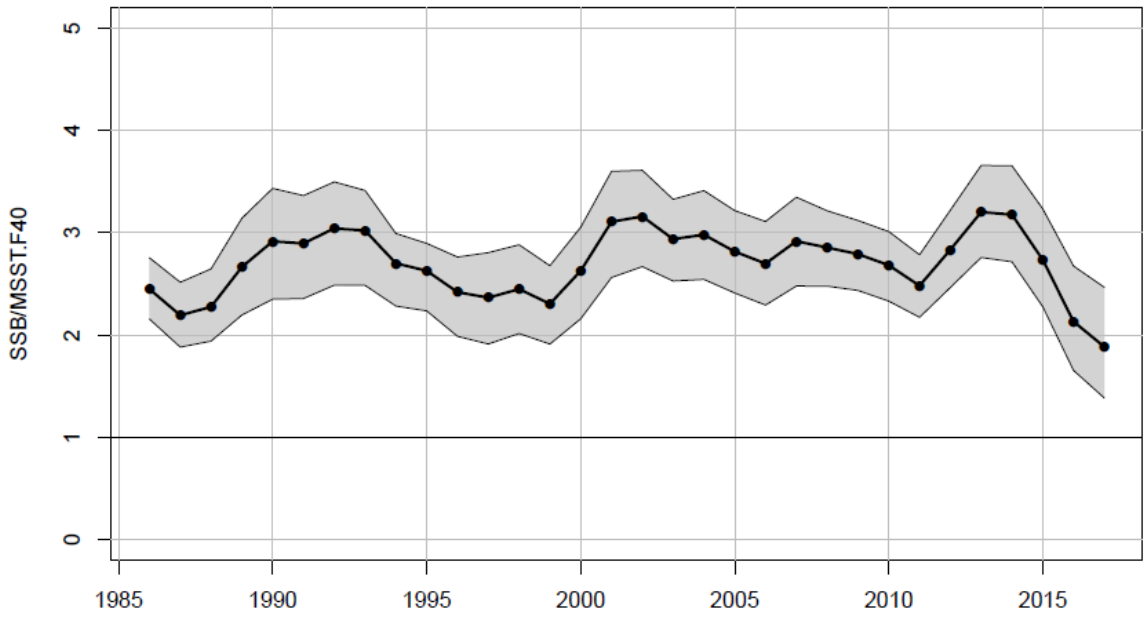

Figure 4. Estimated time series of Spawning Stock Biomass (SSB) relative to the Minimum Stock Size Threshold (MSST) (SEDAR, 2020).

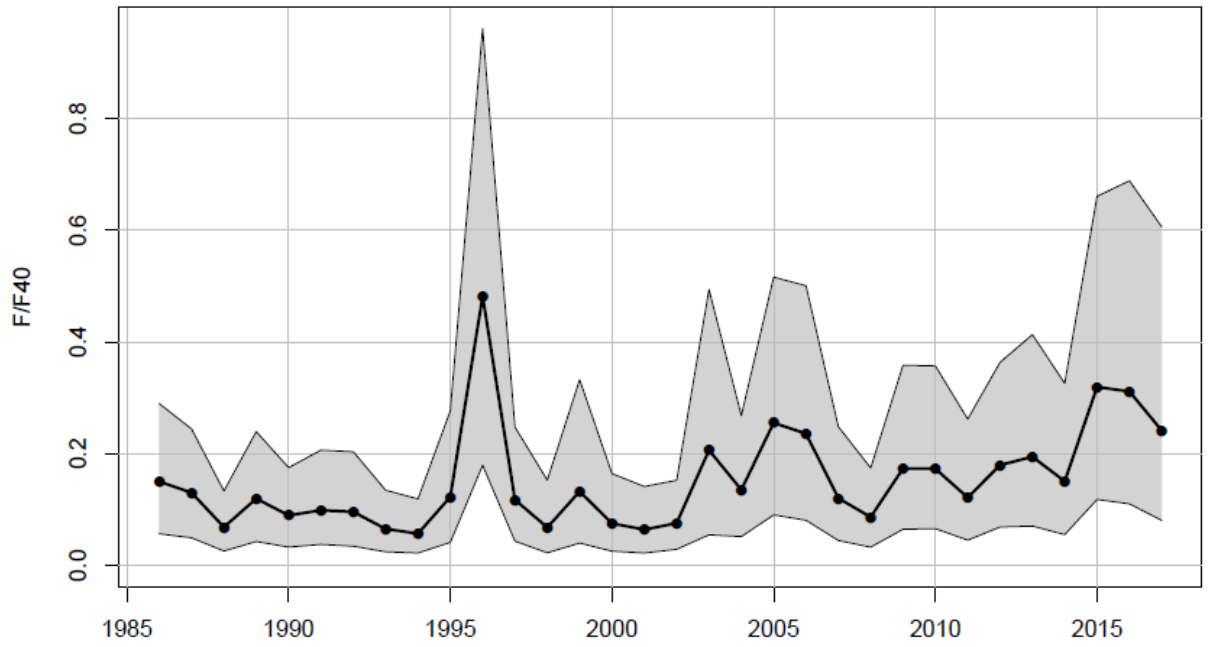

Figure 5. Estimated time series of Fishing Mortality (F) relative to F at Maximum Sustainable Yield ($F_{40\%}$) (SEDAR, 2020).

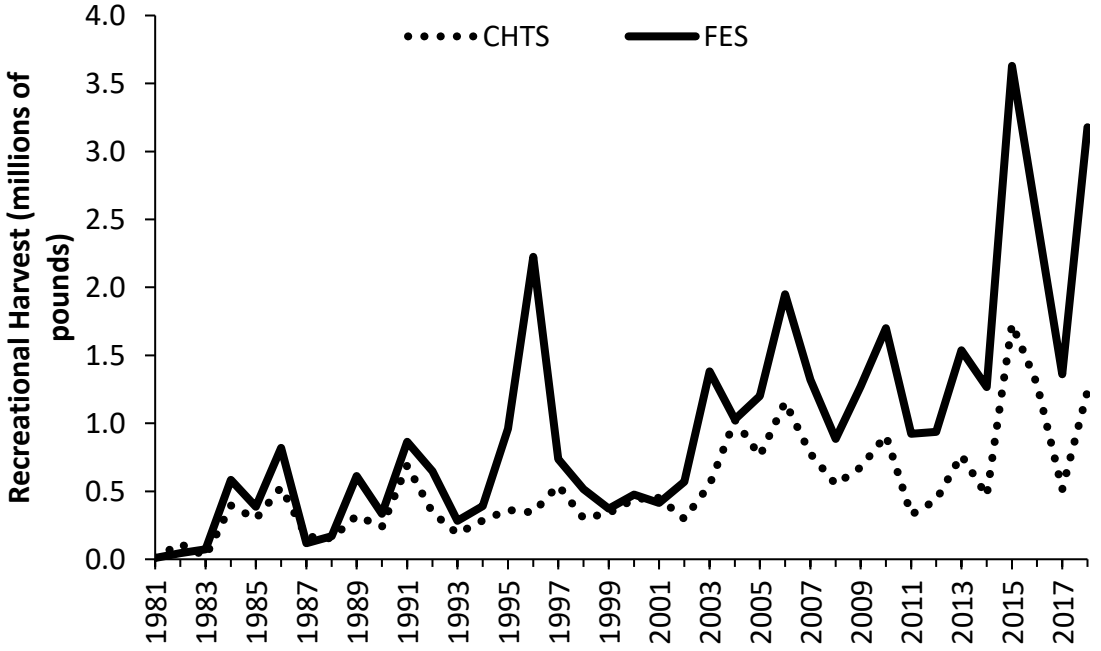

Figure 6. Cobia recreational harvest estimated using the Coastal Household Telephone Survey (CHTS) and the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [05/2019])

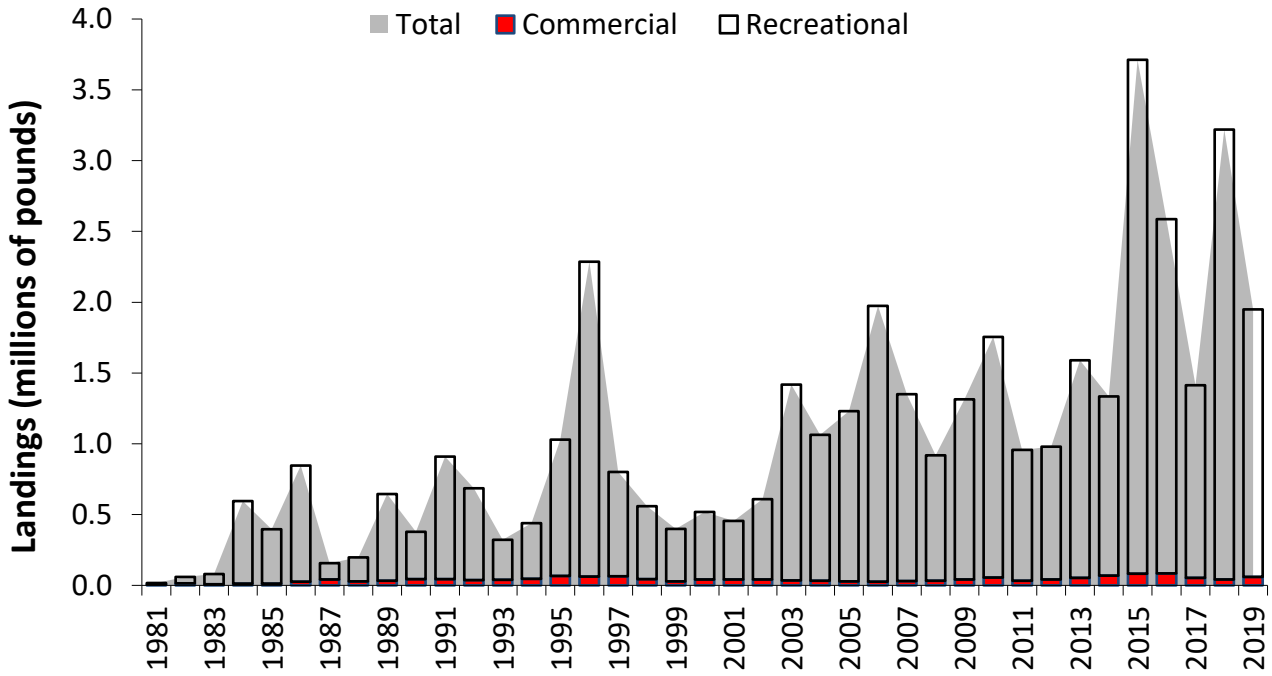

Figure 7. Commercial and recreational landings (pounds) of Atlantic cobia. Recreational data not available prior to 1981. See Tables 2 and 3 for values and data sources.

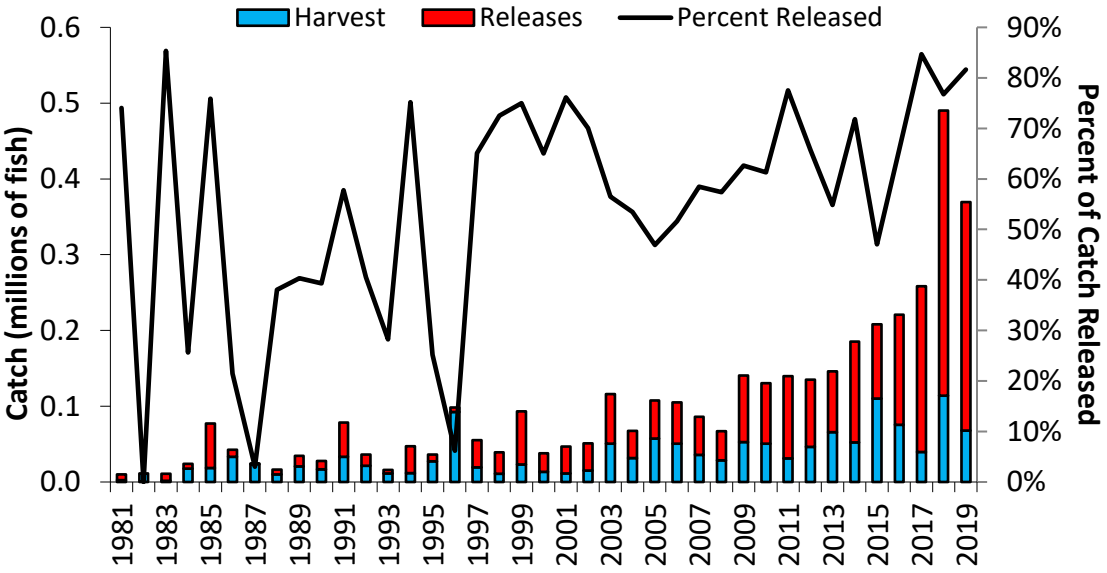

Figure 8. Recreational catch (harvest and live releases) of Atlantic cobia (numbers) and the proportion of catch that is released. See Tables 4 and 5 for values and data sources.

XI. Tables

Table 1. Atlantic cobia regulations for 2019.

State	Recreational Measures	Commercial Measures
NJ	*De minimis*; same as Virginia	Coastwide Possession Limit: 2 fish per person Minimum Size: 33 in fork length or 37 in total length Vessel Limit: 6 fish If commercial fishing in state waters is closed, commercial fishing in federal waters will be recommended to mirror state closures Deviations -Virginia possession limit is per licensee rather than per person -North Carolina has 36 minimum fork length -No commercial harvest in South Carolina state waters -GA possession limit is 1 fish per person and minimum size is 36 in fork length
DE	*De minimis*; same as Virginia Season: June 1-September 15	
MD	*De minimis*; same as Virginia	
PRFC	Bag limit: 1 per person Minimum Size: 40” Vessel Limit: 3 fish Season: June 1-September 30	
VA	Bag Limit: 1 fish per person Minimum Size: 40 in total length Vessel Limit: 3 fish Season: June 1-September 30	
NC	Bag Limit: 1 fish per person Minimum Size: 36 in fork length Vessel Limits/Seasons: Private May 1-31: 2 fish June 1-Dec 31: 1 fish For-Hire May 1-Dec 31: 4 fish	
SC	Bag Limit: 1 fish per person Minimum Size: 36 in fork length Vessel Limits: Southern Cobia Management Zone: 3 fish Other areas: 6 fish Season: Southern Cobia Management Zone: June 1-April 30 Other Areas: Open year-round -If recreational fishing in federal waters is closed, recreational fishing in all SC state waters is also closed.	
GA	Bag Limit: 1 fish per person Minimum Size: 36 in fork length Vessel Limit: 6 fish Season: March 1-October 31	
For all instances when a bag or possession limit is not equal to the vessel limit, the more restrictive rule applies.		

Table 2. Commercial landings (pounds) of Atlantic cobia by state, 2002-2019. (Sources: 2020 state compliance reports for 2019 fishing year; for years prior to 2019, personal communication with Atlantic Coastal Cooperative Statistics Program [ACCSP], Arlington, VA)

Year	N of NJ	NJ	DE	MD	PRFC	VA	NC	SC	GA	Total
2002	C	2,086		C		11,445	21,058	5,007	C	41,012
2003	282	621	C	C		7,387	21,313	4,746	C	35,192
2004	C	576		211		6,143	20,162	4,014	705	C
2005	C	329		C		6,084	17,886	3,773	C	28,829
2006		C		48		2,705	20,270	2,405	C	C
2007	C	1,589		C		5,928	19,005	3,408	245	C
2008	C	C		C		6,755	22,047	3,016	C	33,096
2009	C	1,134		196		5,980	31,898	2,078	C	C
2010	C	270		C		8,504	43,715	2,499	C	55,755
2011	563	C		C		8,500	19,924	4,020	C	33,394
2012	369	699		C		5,382	31,972	3,359	C	C
2013	1317	885	C	C		10,900	35,456	3,829	C	53,177
2014	C	359		C		21,255	41,798	3,492	C	68,076
2015	C	C		C		25,352	52,684	2,487	C	82,117
2016	297	282	C	C		29,459	48,244	4,064	C	83,583
2017	195	C	C	C		26,748	16,890	4,261	C	52,376
2018	C	707		C		21,355	16,578	2,723	C	42,711
2019	1,543	C	C	C	2,375	31,647	21,553	2,447	C	60,592

C: confidential landings.

Table 3. Recreational harvest (pounds) of Atlantic cobia by state, 2002-2019. Values shown are the new MRIP numbers. (Sources: 2020 state compliance reports for 2019 fishing year; for years prior to 2019, personal communication with MRIP [Queried September 2020])

Year	NJ	DE	MD	VA	NC	SC	GA	Total
2002				242,697	319,178	3,446	3,557	568,878
2003			98,524	120,097	223,508	940,447	459	1,383,035
2004				76,408	420,684	426,301	106,405	1,029,798
2005		5,044		792,006	401,557	1,549	899	1,201,055
2006	6,768			1,596,234	196,330	148,146	1,918	1,949,396
2007				499,736	218,447	538,625	63,024	1,319,832
2008				182,451	167,463	37,124	499,198	886,236
2009				855,629	320,075	94,996	1,831	1,272,531
2010			1,179	557,907	808,227	100,614	230,865	1,698,792
2011				341,751	399,192		182,799	923,742
2012	60,473			47,547	102,077	214,512	512,499	937,108
2013				488,181	980,541	24,005	43,915	1,536,642
2014				499,218	645,427	79,171	42,481	1,266,297
2015				1,166,000	1,925,762	434,899	102,917	3,629,578
2016			307	1,505,528	838,363	159,345		2,503,543
2017				488,287	872,861		390	1,361,538
2018		15,053	4,647	2,259,661	685,962	205,647	6,081	3,177,051
2019				1,573,485	254,963	58,204	1,632	1,888,284

Table 4. Recreational harvest (numbers) of Atlantic cobia by state, 2002-2019. Values shown are the new MRIP numbers. (Sources: 2020 state compliance reports for 2019 fishing year; for years prior to 2019, personal communication with MRIP [Queried September 2020])

Year	NJ	DE	MD	VA	NC	SC	GA	Total
2002				7,833	7,196	140	53	15,222
2003			2,364	4,872	6,948	36,319	6	50,509
2004				2,399	12,522	12,010	4,498	31,429
2005		88		38,530	18,491	32	44	57,185
2006	246			39,231	5,154	6,026	116	50,773
2007				13,127	6,262	13,144	3,221	35,754
2008				8,522	3,972	1,649	14,481	28,624
2009				33,504	12,823	6,111	65	52,503
2010			42	16,580	24,030	2,914	6,905	50,471
2011				12,663	10,711		7,990	31,364
2012	18,287			1,429	3,805	7,626	15,104	46,251
2013				24,145	37,617	1,580	2,638	65,980
2014				21,585	24,601	3,883	2,168	52,237
2015				38,672	47,110	15,575	8,934	110,291
2016			56	43,780	26,421	5,437		75,694
2017				14,613	25,025		19	39,657
2018		581	206	80,679	25,331	6,340	233	113,939
2019				55,770	10,090	1,991	72	67,923

Table 5. Recreational live releases (numbers) of Atlantic cobia by state, 2002-2019. Values shown are the new MRIP numbers. (Sources: 2020 state compliance reports for 2019 fishing year; for years prior to 2019, personal communication with MRIP [Queried September 2020])

Year	NJ	DE	MD	VA	NC	SC	GA	Total
2002				15,932	14,036	5,627		35,595
2003			2,556	24,462	21,722	15,976	794	65,510
2004	38			9,984	11,079	13,226	1,752	36,079
2005				25,984	19,083	5,503		50,570
2006				21,512	11,425	21,163		54,100
2007				5,581	12,695	32,022	17	50,315
2008	34			5,091	24,028	1,172	8,166	38,491
2009				32,620	55,374	43		88,037
2010	8,212			20,863	48,590	2,156	40	79,861
2011				26,523	47,151	29,021	5,619	108,314
2012	178			17,184	66,567	4,404	383	88,716
2013				35,731	35,398	7,438	1,577	80,144
2014				58,092	32,184	42,811		133,087
2015	416			40,689	44,254	12,369	283	98,011
2016			1,075	81,482	39,237	20,255	2,917	144,966
2017				77,184	125,251	11,359	4,830	218,624
2018	2,879		21,384	194,865	68,219	71,020	18,056	376,423
2019	10,166	30	251	184,716	38,285	59,008	9,080	301,536