

Atlantic States Marine Fisheries Commission

South Atlantic State/Federal Fisheries Management Board

October 20, 2020

1:15 – 4:15 p.m.

Webinar

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

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|--|-----------|
| 1. Welcome/Call to Order (<i>L. Fegley</i>) | 1:15 p.m. |
| 2. Board Consent | 1:15 p.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from August 2020 | |
| 3. Public Comment | 1:25 p.m. |
| 4. Atlantic Cobia Addendum I to Amendment 1 for Final Approval (<i>T. Kerns</i>) Final Action | 1:45 p.m. |
| • Review Options and Public Comments | |
| • Consider Final Approval of Addendum I to Amendment 1 | |
| 5. Review 2020 Traffic Light Analyses for Atlantic Croaker and Spot | 2:45 p.m. |
| • Review 2020 Reports (<i>D. Franco and H. Rickabaugh</i>) | |
| • Review Management Response Requirements from Addendum III (<i>S. Lewis</i>) | |
| 6. Consider Fishery Management Plan Review and State Compliance for 2019 Fishing Year for Red Drum, Atlantic Croaker, and Atlantic Cobia (<i>S. Lewis</i>) Action | 4:00 p.m. |
| 7. Other Business/Adjourn | 4:15 p.m. |

MEETING OVERVIEW

South Atlantic State/Federal Fisheries Management Board Meeting
Tuesday, October 20, 2020
1:15 – 4:15 p.m.
Webinar

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| Chair: Lynn Fegley (MD) Assumed Chairmanship: 02/20 | Technical Committee (TC) Chairs: Black Drum: Harry Rickabaugh (MD) Cobia: Angela Giuliano (MD) Atlantic Croaker: Dawn Franco (GA) Red Drum: Lee Paramore (NC) Spot: Harry Rickabaugh (MD) | Law Enforcement Committee Representative: Capt. Chris Hodge (GA) |
| Vice Chair: Vacant | Advisory Panel Chair: Craig Freeman (VA) | Previous Board Meeting: August 3, 2020 |
| Voting Members: NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS, SAFMC (12 votes) | | |

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 3, 2020

3. Public Comment – At the beginning of the meeting public comment will be taken on items not on the agenda. Individuals that wish to speak at this time must sign-in at the beginning of the meeting. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance the Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

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| 4. Consider Atlantic Cobia Addendum I to Amendments 1 for Final Approval (1:45-2:45 p.m.) Final Action |
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|-------------------|
| Background |
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| <ul style="list-style-type: none"> • In February 2020, the Board initiated Draft Addendum I to Amendment 1 to consider reflecting the updated MRIP data (used in SEDAR 58) in allocation percentages, reconsider <i>de minimis</i> measures, and update the method for calculating the commercial trigger so that it can be calculated in scenarios when commercial harvest has not approached the quota. The Cobia Plan Development Team developed Draft Addendum I with management options for each of these issues. • The Board approved draft Addendum I for public comment in August 2020. Public hearings were held via webinar in September and early October. (Briefing Materials). |
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| Presentations |
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| <ul style="list-style-type: none"> • Review of options and public comment summary (Supplemental Materials) by T. Kerns |
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| Board actions for consideration at this meeting |
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- | |
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| <ul style="list-style-type: none"> • Review and consider final approval of Draft Addendum I. |
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5. Review 2019 Traffic Light Analyses for Atlantic Croaker and Spot (2:45-4:00 p.m.)

Background

- The Traffic Light Analyses is updated annually for both spot and Atlantic croaker to assess changes to the population in non-benchmark stock assessment years.
- Addendum III (2020) of the Atlantic Croaker FMP and Addendum III (2020) of the Spot FMP incorporated region specific indices, established the reference points for all surveys, changed the management trigger for Spot and Atlantic Croaker, and outlined management responses if management is triggered.
- The Spot and Croaker Technical Committees ran the TLA for each species with the additional year's data.

Presentations

- Review of 2020 Traffic Light Analyses for Atlantic Croaker and Spot by D. Franco and H. Rickabaugh.
- Overview of management response from Addendum III by S. Lewis

6. Consider Approval of 2019 Fishery Management Plan Reviews and Compliance for Red Drum, Atlantic Croaker, and Atlantic Cobia (4:00-4:15 p.m.) Action

Background

- Red Drum state compliance reports are due on July 1. The Red Drum Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. New Jersey and Delaware have requested *de minimis* status.
- Atlantic Croaker state compliance reports are due on July 1. The Atlantic Croaker Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. New Jersey requested *de minimis* status for both its recreational and commercial fisheries, and Delaware, South Carolina, Georgia, and Florida requested *de minimis* status for their commercial fisheries.
- Atlantic cobia state compliance reports are due on July 1. The Cobia Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. New Jersey, Delaware, and Maryland requested recreational *de minimis* status. New Jersey, Delaware, Maryland, and Georgia requested commercial *de minimis* status.

Presentations

- 2020 FMP Reviews for Red Drum, Atlantic Croaker, and Cobia by S. Lewis.

Board actions for consideration at this meeting

- Consider approval of the 2020 FMP Review, state compliance reports, and New Jersey and Delaware's *de minimis* requests for Red Drum.
- Consider approval of the 2020 FMP Review, state compliance reports, and New Jersey, Delaware, South Carolina, Georgia, and Florida's *de minimis* requests for Atlantic Croaker
- Consider approval of the 2020 FMP Review, state compliance reports, and New Jersey, Delaware, Maryland, and Georgia's *de minimis* requests for Cobia.

7. Other Business/Adjourn



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfmc.org

MEMORANDUM

TO: South Atlantic Fisheries Management Board
FROM: Savannah Lewis, FMP Coordinator
DATE: October 10, 2020
SUBJECT: Public Comment on Cobia Draft Addendum I

The following pages represent a summary of all comments received by ASMFC on Cobia Draft Addendum I as of 5:00 PM (EST) on October 6th, 2020 (closing deadline).

A total of 9 comments were received on Draft Addendum I from individuals and organizations. Two organizations, Virginia Saltwater Sportfishing Association and American Sportfishing Association submitted comments on Draft Addendum I. The remainder of comments (7) came from individual stakeholders.

Four public hearings were held by webinar for seven jurisdictions, some jurisdictions combined hearings: Delaware, Maryland, PRFC, Virginia, North Carolina, South Carolina, and Georgia. 25 individuals attended two of the hearings, and 7 of these individuals provided comments.

The following tables (pages 2-3) are provided to give the Board an overview of the support for specific management options contained in the Draft Addendum. Summaries of the public hearings can be found next. These are followed by letters sent by organizations and letters/emails sent by individuals.

M20-113

Public Comment Summary Tables

Addendum I

Issue 1: Recreational and Commercial Allocation

| Written Comments | A. Status Quo | B. 97%/3% | C. 96%/4% | D. 95%/5% |
|-------------------------|----------------------|------------------|------------------|------------------|
| Individual | 7 | - | - | - |
| Organization | - | 2 | - | - |
| Public Hearings | | | | |
| VA | 1 | 1 | 1 | - |
| DE/PRFC/MD | - | - | - | - |
| NC | 3 | - | - | - |
| SC/GA | - | - | - | - |
| Total | 11 | 3 | 1 | 0 |
| | | | | |

Addendum I

Issue 2: Commercial Trigger

| Written Comments | A. Status Quo | B. 97%/3% |
|-------------------------|----------------------|------------------|
| Individual | - | - |
| Organization | - | 1 |
| Public Hearings | | |
| VA | 1 | 2 |
| DE/PRFC/MD | - | - |
| NC | 2 | 1 |
| SC/GA | - | - |
| Total | 3 | 4 |
| | | |

Addendum I

Issue 3: Commercial *De Minimis* Set Aside

| Written Comments | A. Status Quo | B. 3% or 3,000 | C. 3% or 5,000 | D. 4% | E. 4% or 3,000 | F. 4% or 5,000 |
|-------------------------|----------------------|-----------------------|-----------------------|--------------|-----------------------|-----------------------|
| Individual | - | - | 1 | - | - | - |
| Organization | - | 1 | - | - | - | - |
| Public Hearings | | | | | | |
| VA | - | - | - | - | 1 | 1 |
| DE/PRFC/MD | - | - | - | - | - | - |
| NC | - | - | - | - | - | - |
| SC/GA | - | - | - | - | - | - |
| Total | 0 | 1 | 1 | 0 | 1 | 1 |
| | | | | | | |

Addendum I

Issue 4: Recreational and Commercial Allocation

| Written Comments | A. Status Quo | B. 31 FL | C. 33 FL |
|-------------------------|----------------------|-----------------|-----------------|
| Individual | - | - | 1 |
| Organization | - | - | - |
| Public Hearings | | | |
| VA | - | - | 3 |
| DE/PRFC/MD | - | - | - |
| NC | - | - | 2 |
| SC/GA | - | - | - |
| Total | 0 | 0 | 6 |
| | | | |

Cobia Draft Addendum I Public Hearing Summaries

Virginia Webinar

September 22, 2020

14 Participants: Dewey Hemilright, John Bello, Travis O'Neal, Jack Lythgoe, Chris Moore, David Sikorski, Susanna Musick, Mike Avery, Mark Hiltke, Michael Heath, Wes Blow, Shirley Edgerton, Chris Batsavage, Mike Auriemma

Staff: Toni Kerns (ASMFC), Savannah Lewis (ASMFC), Par Greer (VMRC), Jill Ramsey (VMRC), Shanna Madsen (VMRC), Olivia Phillips (VMRC)

Issue 1: Recreational and Commercial Allocation

➔ **1 in favor of option A, 1 in favor of option B, and once in favor of option C**

- One individual supported option D to allow for the highest available quota outside of status quo to accommodate the growing commercial harvest of *de minimis* states.

Issue 2: Commercial Trigger Calculation

➔ **1 in favor of option A, two in favor of option B**

- No Comments

Issue 3: Commercial *De Minimis* Set Aside

➔ **1 in favor option E, 1 in favor of option F**

- No Comments

Issue 4: *De Minimis* Size Limits

➔ **2 in favor option C**

- No Comments

Additional Comments: The public hearing participant expressed a growing concern among recreational anglers about the spawning stock of cobia. They wonder if measures to allow for better protection of larger fish and more harvest of smaller fish would be an appropriate management measure. Over the years, the recreational anglers have seen a decline in the bigger fish, and they do not want to see a decline in the stock.

North Carolina Webinar

October 1, 2020

11 Participants: Charlie Locke, Dewey Hemilright, William Gorham, , Tilman Gray, Patrick Parsons, Joey Vandyke, Travis Kemp, Aaron Kelly, Blake Huling, Mike Waine, Scott Williams

Staff: Toni Kerns (ASMFC), Savannah Lewis (ASMFC), Chris Batsavage (NCDNR), Brandi Salmon (NCDNR), Anne Markwith (NCDNR), Meredith Whitten

Issue 1: Recreational and Commercial Allocation

➔ **4 in favor of of Option A**

- One participant was strongly in favor of status quo because the commercial industry has closed for the last three years and has not had the opportunity to try and harvest the 8% quota at the

increased quota. They indicated that the de minimis landings will only increase, and, since their quota is dependent on the commercial quota, that the new quota should be able to accommodate the growing fishery. The cobia fishery is mainly a bycatch fishery, and should be open year round due to consumer demand, high price per pound, and year round fish availability. There was also concern that if a future stock assessment decreases the quota, that the commercial industry would be hit very hard at 3% of the total quota. Another participant agreed with this statement. A third participant also agreed with keeping it status quo, and recommended revisiting a change in allocation in a few years once the commercial industry has a chance to try and catch their quota.

- One participant brought up that when quota gets taken away from the commercial industry that the consumer also loses. Cobia is considered a public trust resource and cut to the resource deprive the public who may not be able to afford to go out and catch their own cobia. Since North Carolina has an abundant supply of wild caught cobia, why not provide those fish over farm raised fish.

Issue 2: Commercial Trigger Calculation

➔ **2 in favor of option A, 3 in favor of option B**

- No Comments

Issue 3: Commercial *De Minimis* Set Aside

➔ **No votes**

- One participant said that de minimis states are only increasing harvest, so we should give them as much as possible to allow that fishery to grow.

Issue 4: *De Minimis* Size Limits

➔ **2 in favor of option C**

- No Comments

Additional Comments: One participant commented that bycatch needs to be explored further, and should have been fleshed out more prior to this stage in the document approval. They requested more information be made available at the board meeting regarding discards and commercial harvest by gear type.

South Carolina and Georgia Commission Webinar

September 29, 2020

Staff: Toni Kerns (ASMFC), Savannah Lewis (ASMFC), Mel Bell (SC), Doug Haymans (GA), Dawn Franco(GA), Kathy Knowlton (GA), Carolyn Belcher (GA), Michael Auriemma (NJ)

No members of the public attended.

Delaware, Maryland, and Potomac River Fisheries Commission Webinar

September 24, 2020

Staff: Toni Kerns (ASMFC), Savannah Lewis (ASMFC), John Clark (DE), Lynn Fegley (MD), Martin Gary (PRFC)

No members of the public attended.



October 1, 2020

Toni Kerns
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200
Arlington, Virginia 22201

Dear Ms. Kerns

The American Sportfishing Association (ASA) appreciates the opportunity to provide comments to the Atlantic States Marine Fisheries Commission (ASMFC) on Draft Addendum 1 to Amendment 1 to the Atlantic Migratory Group Cobia Fishery Management Plan (FMP).

ASA is the nation's recreational fishing trade association and represents sportfishing manufacturers, retailers, wholesalers, and angler advocacy groups, as well as the interests of America's 49 million recreational anglers. ASA also safeguards and promotes the social, economic, and conservation values of sportfishing in America, which results in a \$125 billion per year impact on the nation's economy.

The recreational fishery for Atlantic cobia is economically important to the sportfishing industry throughout the Southeast and Mid-Atlantic regions. To help assist ASMFC in developing a comprehensive FMP for cobia, that is responsible to the resource and its fisheries, we submit the following comments on Draft Addendum 1 to the cobia FMP.

3.1 Recreational and Commercial Allocations

We support Option B – 97% Recreational and 3% Commercial.

It is unclear from Draft Addendum 1 what the allocations would be if the new MRIP data were simply included in the original allocation timeframe calculation. However, this can be calculated by reconstructing commercial landings from Table 2 in Draft Addendum 1 and then applying both recreational and commercial landings data to the allocation equation detailed on page 3 of the addendum. This computation yields a 97.38% allocation to the recreational sector and a 2.62% allocation to the commercial sector.

To us, this represents a more realistic view of status quo than option A because it uses the same landings data for both allocation and fishery specifications. Furthermore, the draft Addendum considers allocation options that result in an increase in commercial quota (options A, C and D), but the specific need for that increase is not substantially justified. Therefore, until we better understand the need to increase commercial quota (beyond just changes to MRIP data) we support the implementation of Option B.

Thank you for your consideration.

Sincerely,

Michael Waine
Atlantic Fisheries Policy Director
American Sportfishing Association

Virginia Saltwater Sportfishing Association, Inc (VSSA)

3419 Virginia Beach Blvd #5029

Virginia Beach, VA 23452

www.ifishva.org



John Satterly
President

David Tobey
Vice President

Mike Avery
Treasurer

Mike Avery
Secretary

Toni Kerns, FMP Coordinator
1050 N. Highland St., Suite 200 A-N,
Arlington, Virginia 22201

Dear Toni Kerns,

October 5, 2020

Subject: Cobia Draft Addendum I

On behalf of the Virginia recreational anglers, VSSA offers the following comments to the Cobia Draft Addendum I:

With respect to Issue 3.1 Recreational and Commercial Allocations, VSSA recommends **Option B, recreational quota of 97% and commercial quota 3%.**

As ASMFC assesses MRIP catch estimates for the 2020 fishing season, VSSA urges ASMFC to give strong consideration to the data collected by VMRC mandatory reporting numbers which likely offers a more accurate assessment of actual catch estimates for the state of Virginia.

Thank you for your time and consideration.

Sincerely,

Mike Avery
Mike Avery, Secretary

Copy to Virginia Marine Resources Commission

Board of Directors

Curtis Tomlin,
Chairman

Mike Avery

John Bello

Adrian Marchi Jr.

Jerry Hughes

Travis O'Neal

Mark Roy

David Tobey

Ben Burbic

Steve Atkinson

John Satterly

John Powers

Comments

From: Patrick Caton <patrickmcaton@gmail.com>
Sent: Sunday, October 4, 2020 4:34 PM
To: Comments
Subject: [External] Cobia draft addendum

My name is Patrick Caton, I am the captain of the Little Clam in Hatteras NC. I participate in commercial fishing and recreational fishing for cobia. The recreational quota and commercial quota should stay at 92% and 8%, and dropping of the commercial quota would be an insult to the commercial fisherman, and the consumers. Stay at 92% and 8%.

Patrick Caton
F/V Little Clam

Comments

From: info@rocksolidfishing.com
Sent: Thursday, October 1, 2020 8:36 PM
To: Comments
Subject: [External] Cobia Ad 1

Samantha thank you for conducting the meeting this evening. Going over the Cobia Draft Addendum this evening I wanted to submit comment. I care and am involved with the fishery. I feel I understand many facets of the cobia fishery. Issue 1 option A Status Quo. Is what I feel is the correct option. In my mind trying to evaluate the poundage as opposed to single fish as in the recreational sector I quickly tried to compare apples to oranges and came up with something that could make sense to me. 50,000 some pounds of fish divided by say 30 lb average comes to 1800 fish. If the commercial gets to stay at their allotted 8% that's only 3600 more fish. I always hedge towards conservation, however I do not like waste. These fish are discarded to the sharks when these fisherman are not allowed to sell them. It is a year round incidental by catch. Spanish mackerel nets, bottom fishing, king mackerel trolling, shark nets and more. I do not see this as any issue letting these folks retain and sell this valuable resource. I also do not feel it will lend itself to more opportunistic large mesh gillnetters targeting cobia. It is just letting the commercial folks sell what is already caught. That increase will not decrease or change the recreational landing because those fish are not swimming down the coast regardless if they are sold or shark food.

Issue 2 option b The old triggers are outdated time to try a new approach

Issue 3 C no more than 5000lbs This will be an issue in the future as Northern de minimus states want to sell more fish

Issue 4 option C The more mature fish will give more opportunity for spawning.

Hope I conveyed my thoughts on the Addendum gotta get some sleep gotta fish tomorrow when I get a chance I will sleep at A holiday Inn express so I can truly grasp the trigger de minimus. Kidding thank you Capt Aaron Kelly

Capt Aaron Kelly
Rock Solid Fishing
252-441-6575
Rocksolidfishing.com

Comments

From: Tilman Gray <tilmangrayjr@yahoo.com>
Sent: Thursday, October 1, 2020 7:22 AM
To: Comments
Subject: [External] Cobia

I commercial fish out of Hatteras year round and I have seen great evidence that we have our own stock of cobia and I'm tired of throwing good product over. We need more cobia.
Sent from my iPhone

Comments

From: obxlocke@aol.com
Sent: Tuesday, October 6, 2020 4:59 PM
To: Comments
Subject: [External] Cobia Draft Addendum 1

Dear Ms. Kerns, Technical Committee, and ASMFC Members;

As a commercial fisherman from North Carolina, I vote for status quo on the quota allocation -- keeping it at 8% of ACL for commercial fishermen.

We have been constrained the last three falls with early closures and have not been able to utilize the cobia's we catch incidentally while targeting other species. We have year-round access to cobia's and need the 8% to ensure we do not waste the resource we encounter. There is substantial market demand for this fish by the consumer, and status quo now will mean they can have year-round access to this fish. After all, isn't this a public trust resource? The consumer has no seat at the table for these policy discussions.

Also in consideration should be that North Carolina has moved it's commercial size limit to 36 inches fork length for ease of enforcement. Therefore, we are allowing bigger fish to reproduce. The data shows that at 33 inches 100% of the females are mature. This larger size limit also means North Carolina, when compared to other states, will exhaust the quota (poundage) sooner even when keeping to the 2 fish per person (up to 6 per boat) limit.

As far as the de minimis states are concerned, there will be increased landings as waters warm and these fish move northward. These states allocation comes off the commercial quota. They can keep fishing with no closure. These fish come off the total commercial allocation. Therefore, as more de minimis states catch fish, our piece of the pie will get smaller. Again, this argues for status quo -- the 8% allocation.

From a management stand point, we do not even know what the effect will be from a simple increase in quota (leaving all other management status quo). Will the recreational even catch their increased number of fish?? Give us a chance to harvest this fish for a year or two and then if the Technical Committee deems necessary, we can revisit allocation.

We already are having to go back and retrieve quota that was given away to the recreational sector for Spanish mackerel managed by SAFMC. A total of 1.5 million pounds was left on the table while the commercial season closed early the last two years. Let's not repeat that past mistake.

Thanks for your consideration,

Charlie Locke
F/V Salvation
Wanchese, N.C.
252-982-6488

Comments

From: Francis Hemilright <fvtarbaby@embarqmail.com>
Sent: Tuesday, October 6, 2020 3:22 PM
To: Comments
Subject: [External] Cobia Addendum 1

Savannah Lewis
FMP Coordinator ,Cobia

Option A. (Status Quo) The recreational quota will be 92% of the coastwide total harvest quota set through Board specification. The commercial quota will be 8% of the coastwide total harvest quota set through Board specification. Under the 2020-2022 total quota, the recreational quota would be 73,703 fish and the commercial quota would be 146,232 pounds.

I support this option because this will allow for the unaccountable regulatory discards to be turned into landings, I don't understand how states have no method to account for number of trips that met the trip limit because there is no counting the numbers of fish landed on trip tickets, only pounds harvested, that a problem. Given that in commercial Cobia landings there are two different fishery's one directed by hook&line [with sight casting] and by-catch non sight casting, also in NC there is Cobia available year around and fisherman are limited on size of Cobia that they can incidentally catch based on size net that they use to catch other fish.so allowable size limit should be under reviews by-catch aren't targeting the largest fish as possible

There is no methodology for state water fisherman or dealers to report numbers fish harvest and or discards of released fish for fisherman.

Also as we are seeing this stock increasing over last few year and expanding northerly in there range, it would be really good if the ASMFC could address these issue's of accounting of harvest in numbers of fish, size of harvested of fish in gear used, season of harvest and dealer report of numbers of fish, by doing this it would give opportunity to see the needs of fitting available quota to the commercial Cobia and its expanding range.

Inclosing

contrary to what i heard in public this is not a [WINDFALL]

To the commercial fisherman has been constrained by a per person or vessel limit and when its reached you discard the rest if and when ,with management given no mechanism to report numbers of fish discarded or landed,

Commercial are giving access to the consumer for fresh seafood with Cobia.

Thank you for considering my comments,
Dewey Hemilright

Comments

From: Thomas Newman <thomas.newman03@gmail.com>
Sent: Monday, October 5, 2020 12:29 PM
To: Comments
Cc: DEWEY HEMILRIGHT; Chris Batsavage; Charlie Locke
Subject: [External] Cobia Draft Addendum I

I want to mainly comment on 3.1 Issue 1 : Recreational and Commercial Allocations

I recommend option A. (Status Quo)

First point I would like to make is commercial landings presented in Figure 1 have been on an upward trend since 1999. That timeline also corresponds with multiple early season harvest closures when the opportunity for commercial harvest was cut short. We needed the extra quota in the past and we are going to need it in the future according to the trend of increased harvest.

Second point I would like to make is the commercial landing numbers were not recalculated like the recreational harvest was using the new MRIP numbers. We have had good concrete data on our landings for many years, especially in my home state of North Carolina. If we are to really look at these numbers on a fair playing field, the commercial landings should be at the very least extrapolated to show what landings could have been during years our cobia quota was caught before our fall fisheries even began, now that MRIP numbers show the overall quota should have been higher in the past.

Third point I would like to make is that reducing our allocation from 8% to 3% is not just a simple 5% reduction. It is actually a 62.5% reduction of the current commercial allocation! And when the overall quota is reduced in the future, would we automatically go back to an 8% allocation if a reduction happens? I would guess no and then that would leave us with a very small commercial quota that would leave us coming up short again.

Fourth point I would like to make is that reducing commercial allocation doesn't just hurt the fishermen, it hurts consumers. Restaurants, retailers, and individuals who buy seafood will have to buy farm raised cobia when the season is closed. Probably from foreign countries with inferior fisheries laws and food safety regulations.

I also think this is a slight of hand attempt to set a precedent for quota grab from the recreational industry through these new MRIP numbers. As each new stock assessment happens the trends are going to be very similar. Recreational landings will show over harvest resulting in overall quota increases for both sectors. Commercial landings remain static because our landings were already correct and it looks like we are under harvesting when in reality our fishing patterns have revolved around quota for decades. We slow our harvest through regulations as quotas are beginning to fill and we switch to other species when quotas are full. Common sense tells you, our past harvest data would have been higher if our quotas had been higher.

I think a precedent needs to be set across all species going into a new era of stock assessments with recalculating recreational landings with MRIP numbers. Give the commercial industry at least 5 years on any overall quota increases to have the opportunity to land the additional quota before reallocation is even put on the table.

Thank you for your time,
Thomas E Newman III
252-542-0449
Sent from my iPhone

Comments

From: Mac Bishop <macbishop17@gmail.com>
Sent: Thursday, October 1, 2020 7:08 AM
To: Comments
Subject: [External]

We as commercial fisherman need this extra quota. There is cobia off our beaches year around. With more regulations being put on us in inland waters, making it to where we can't fish in the sound there will be coming caught in the ocean

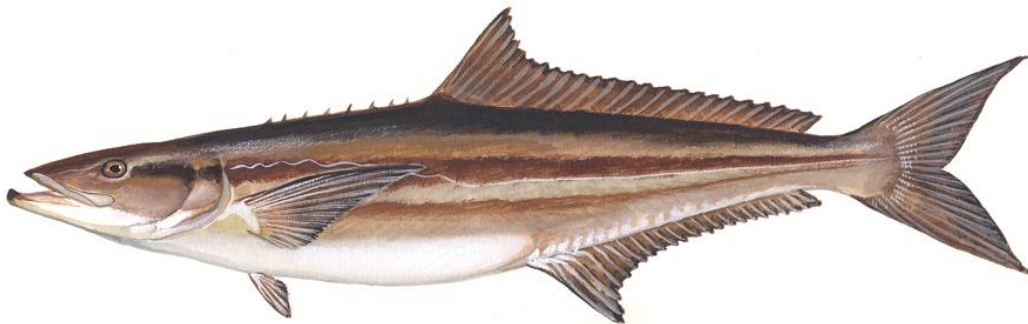
DRAFT DOCUMENT FOR BOARD REVIEW

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
Drafted October 2020



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

DRAFT DOCUMENT FOR BOARD REVIEW

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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 ($F_{2015-2017}/F_{40\%} = 0.29$).

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.

Fishery-Dependent Monitoring

- 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

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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:

Biological

- 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.

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- 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.

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- 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

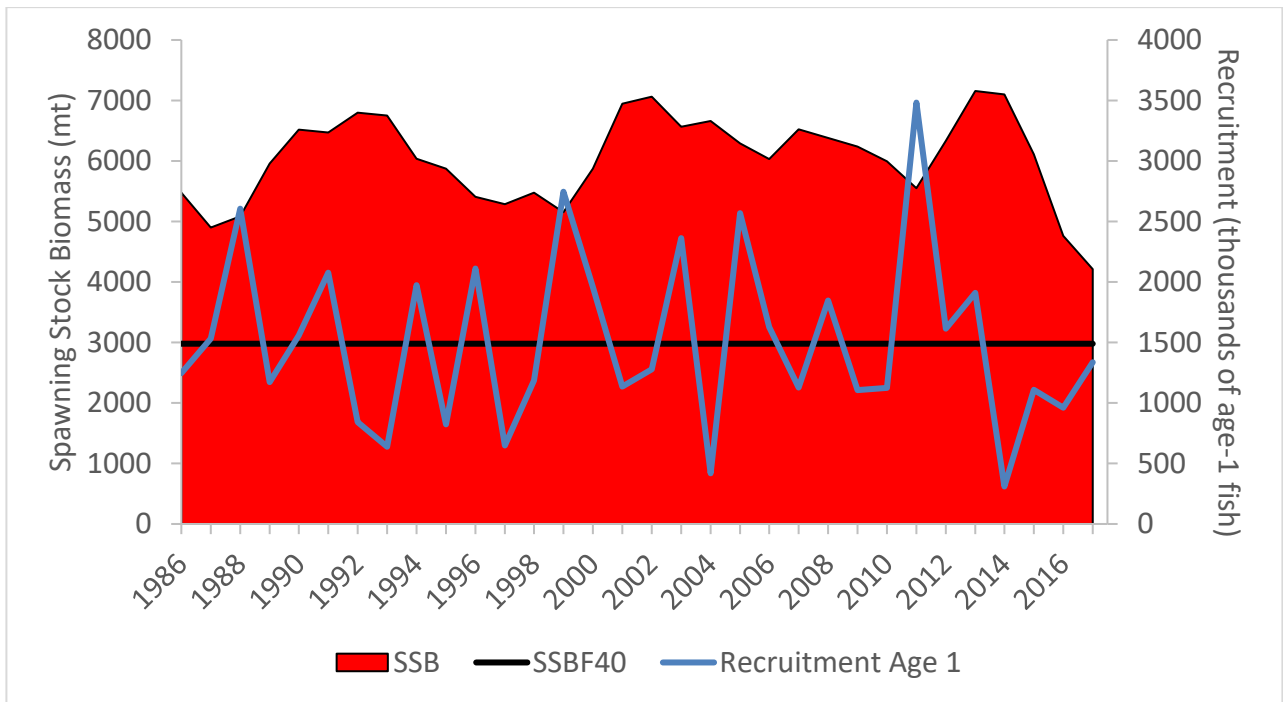


Figure 1. Atlantic Cobia spawning stock biomass (SSB) and recruitment of year 1 fish. (SEDAR, 2020)

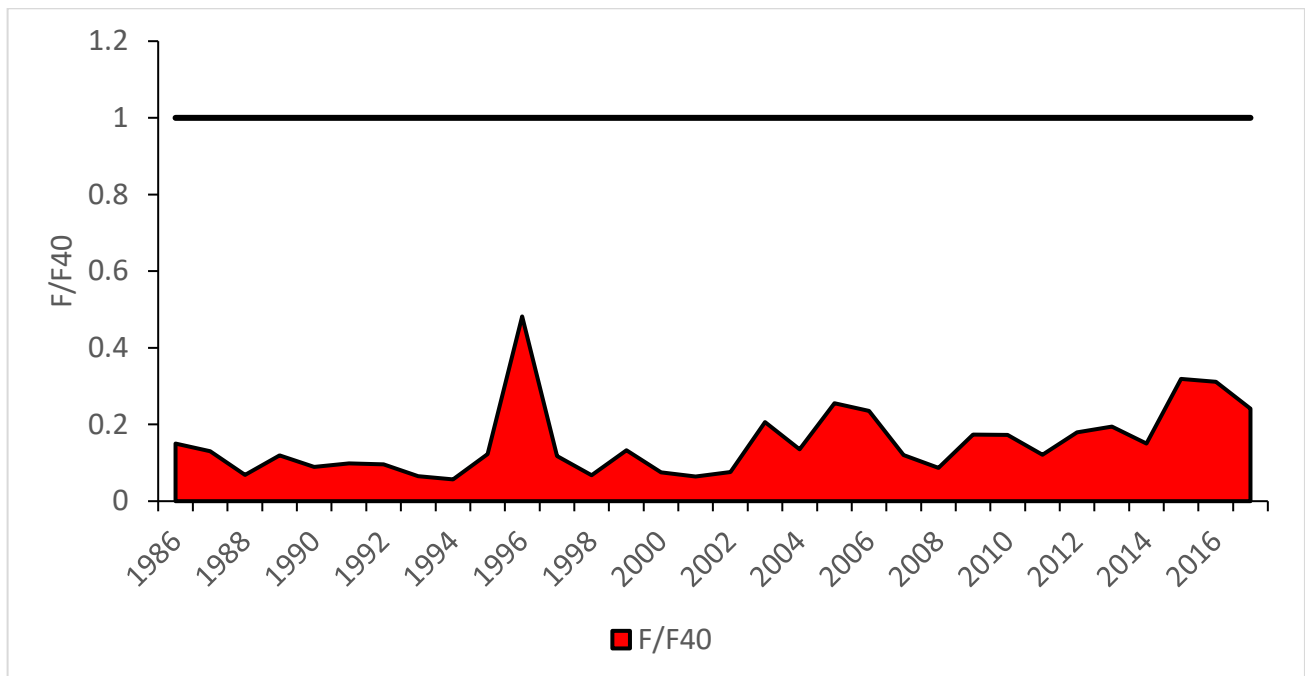


Figure 2. Atlantic Cobia fishing mortality (F) relative to the F40 reference point from 1986-2017. (SEDAR, 2020)

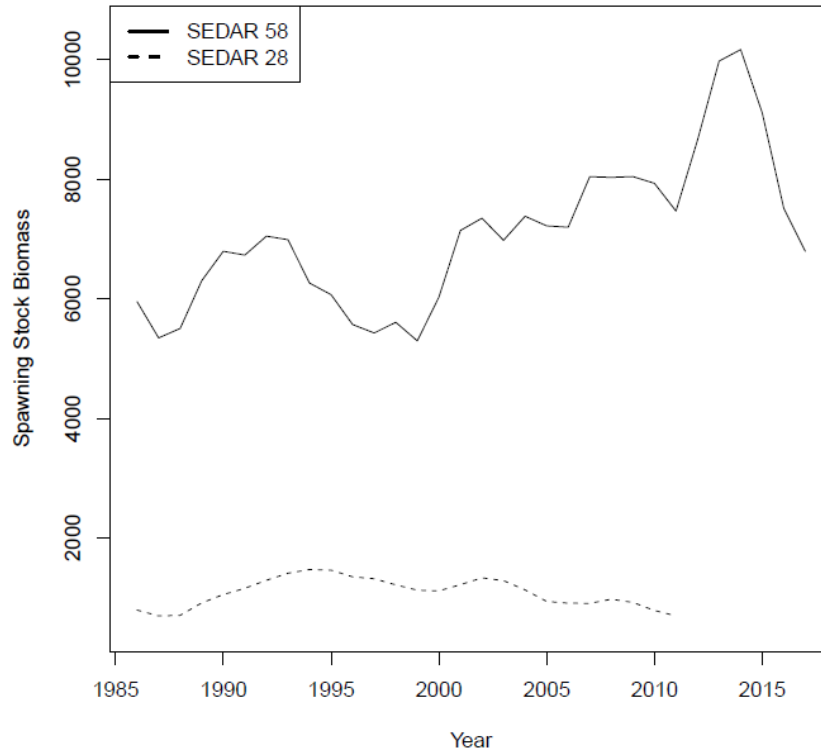


Figure 3. Comparing spawning stock biomass from the current assessment (SEDAR 58) to the last assessment (SEDAR 28). (SEDAR, 2020)

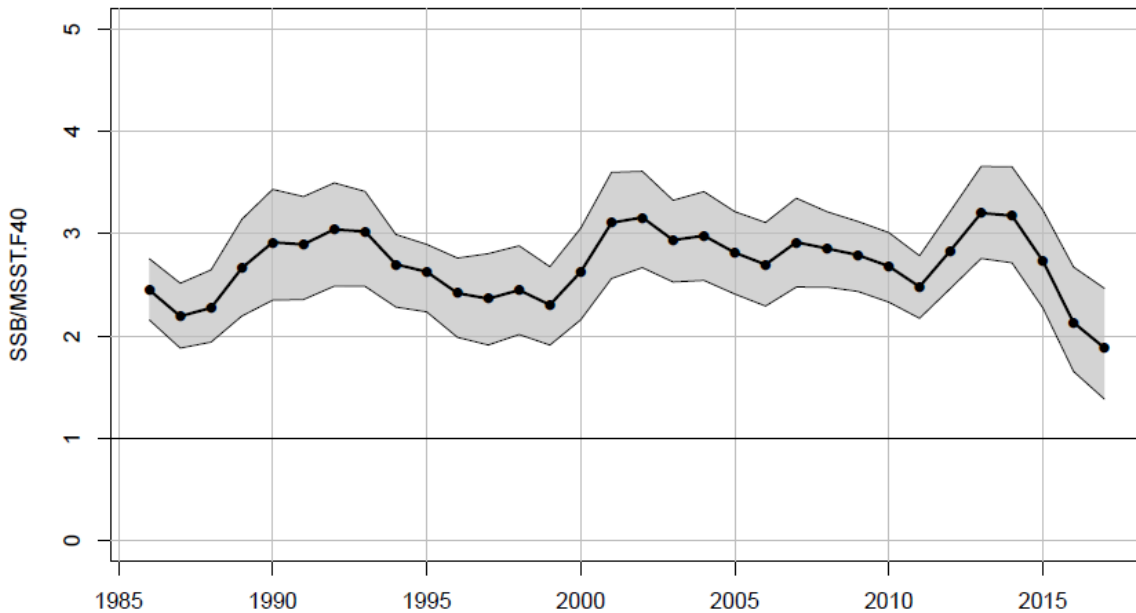


Figure 4. Estimated time series of Spawning Stock Biomass (SSB) relative to the Minimum Stock Size Threshold (MSST) (SEDAR, 2020).

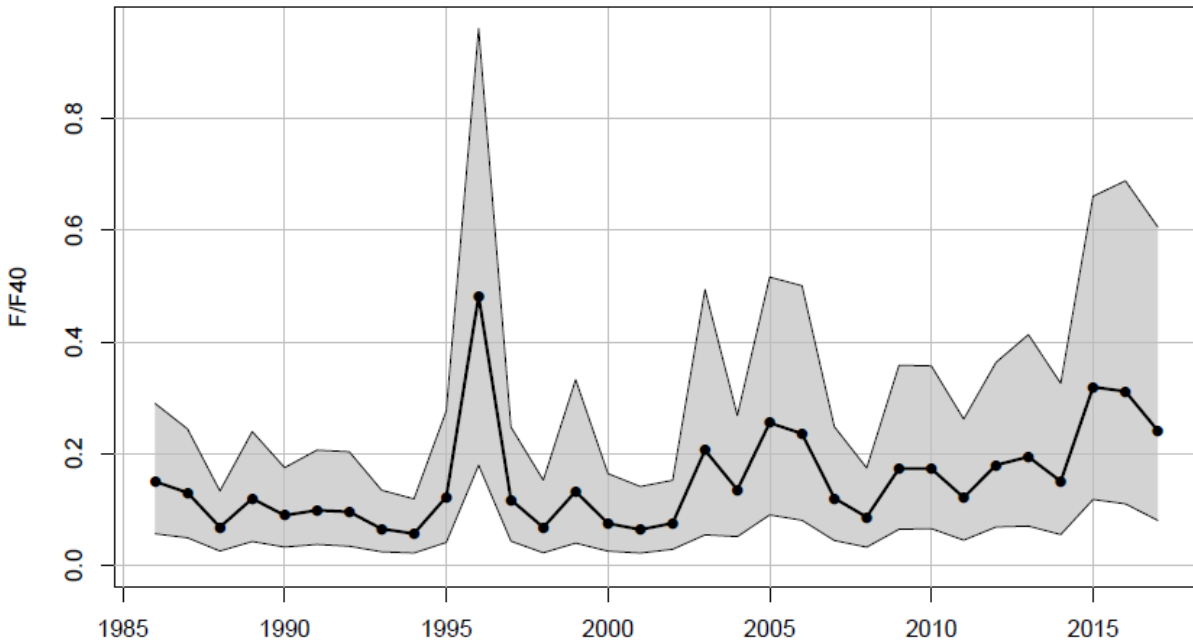


Figure 5. Estimated time series of Fishing Mortality (F) relative to F at Maximum Sustainable Yield (F_{40%}) (SEDAR, 2020).

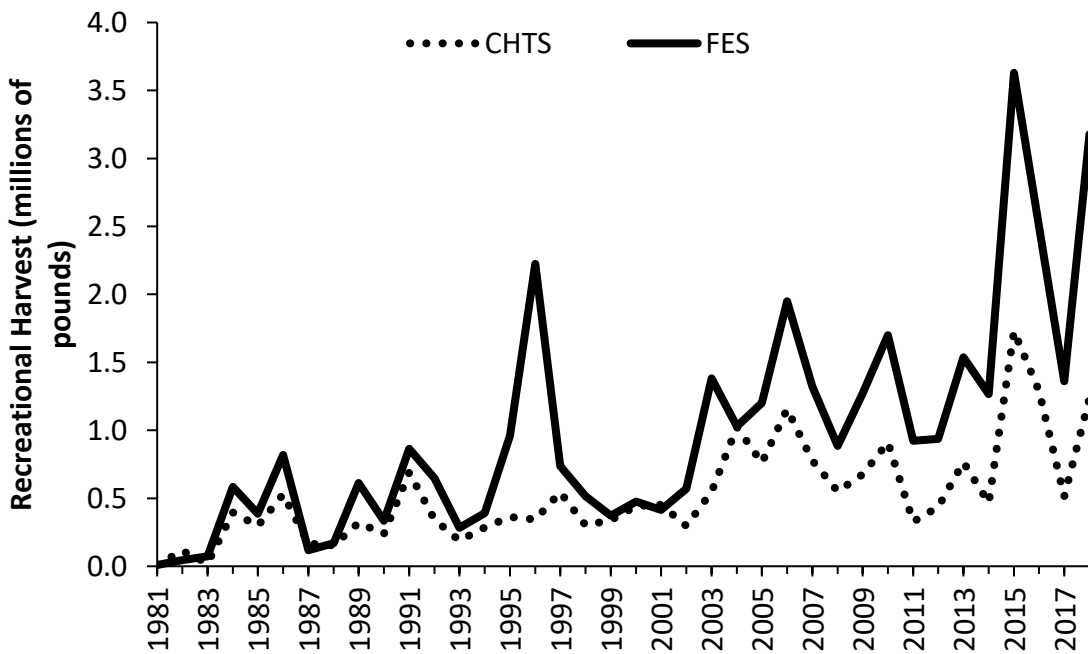


Figure 6. Cobia recreational harvest estimated using the Coastal Household Telephone Survey (CHTS) and the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [05/2019])

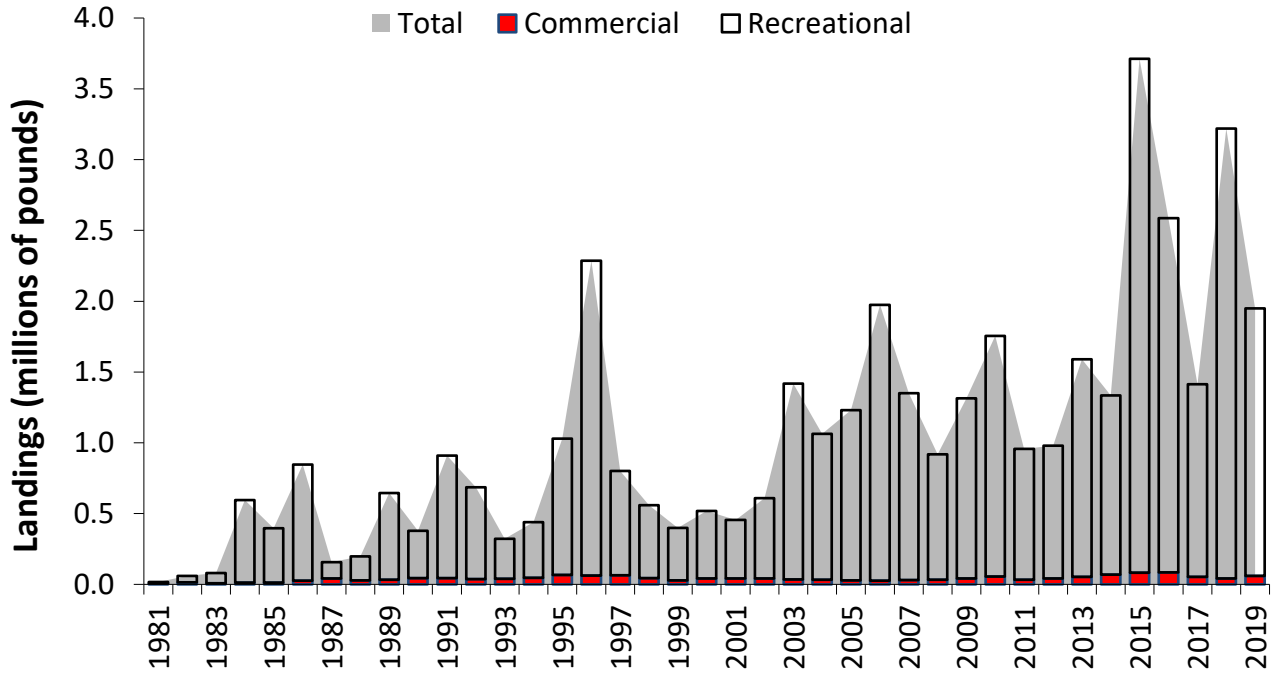


Figure 7. Commercial and recreational landings (pounds) of Atlantic cobia. Recreational data not available prior to 1981. See Tables 2 and 3 for values and data sources.

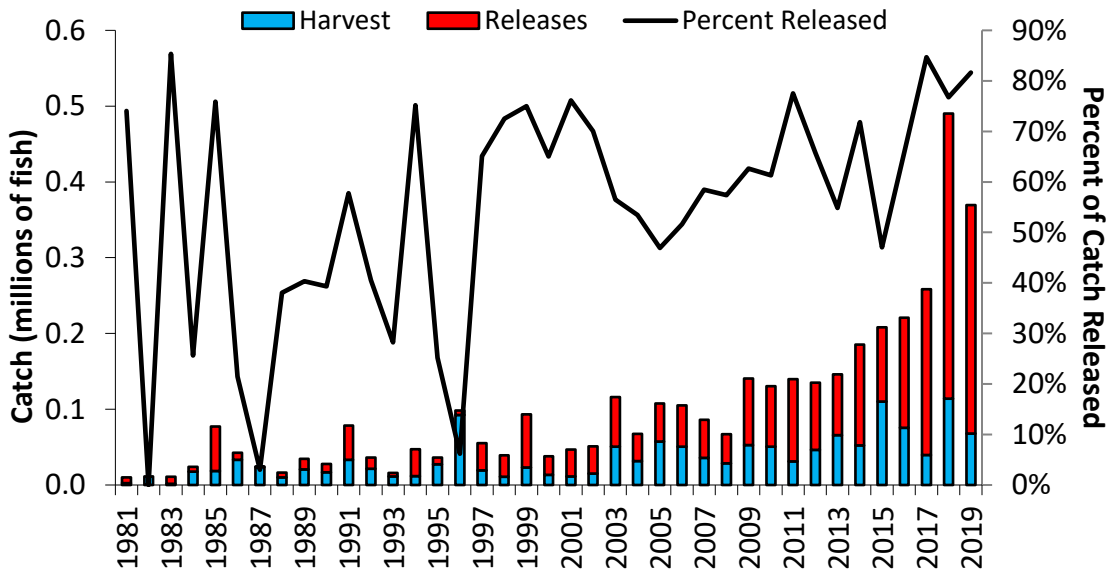


Figure 8. Recreational catch (harvest and live releases) of Atlantic cobia (numbers) and the proportion of catch that is released. See Tables 4 and 5 for values and data sources.

XI. Tables

Table 1. Atlantic cobia regulations for 2019.

| State | Recreational Measures | Commercial Measures |
|---|--|--|
| NJ | <i>De minimis</i> ; same as Virginia | <u>Coastwide</u> 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 <u>Deviations</u> -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 | <i>De minimis</i> ; same as Virginia Season: June 1-September 15 | |
| MD | <i>De minimis</i> ; 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: <u>Private</u> May 1-31: 2 fish June 1-Dec 31: 1 fish <u>For-Hire</u> 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. | | |

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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 | 70 | 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 | 758 | 576 | | 211 | | 6,143 | 20,162 | 4,014 | 705 | 32,569 |
| 2005 | C | 329 | | C | | 6,084 | 17,886 | 3,773 | C | 28,829 |
| 2006 | | C | | 48 | | 2,705 | 20,270 | 2,405 | C | 25,428 |
| 2007 | 137 | 1,589 | | C | | 5,928 | 19,005 | 3,408 | 245 | 30,312 |
| 2008 | C | C | | C | | 6,755 | 22,047 | 3,016 | C | 33,096 |
| 2009 | 134 | 1,134 | | 196 | | 5,980 | 31,898 | 2,078 | C | 41,900 |
| 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 | 41,781 |
| 2013 | 1317 | 885 | C | C | | 10,900 | 35,456 | 3,829 | C | 53,177 |
| 2014 | 311 | 359 | | C | | 21,255 | 41,798 | 3,492 | C | 68,076 |
| 2015 | 235 | 212 | | 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 | 678 | 707 | | C | | 21,355 | 16,578 | 2,723 | C | 42,690 |
| 2019 | 1543 | 1,367 | 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 |

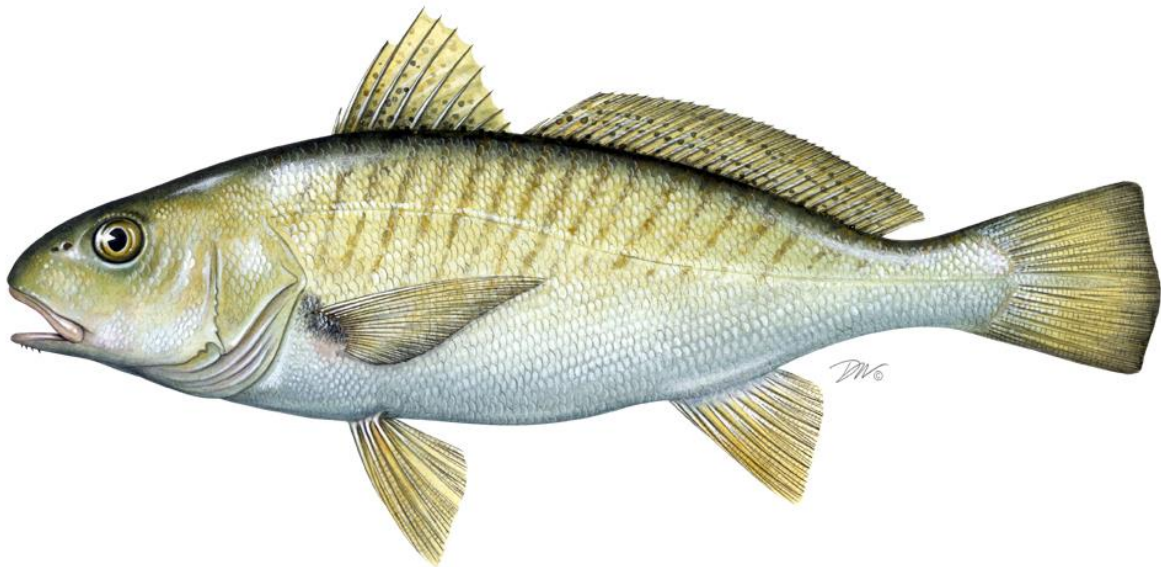
Table 5. Recreational live releases (numbers) of Atlantic cobia by state, 2002-2019. Values shown are the new MRIP numbers. (Sources: 2020 state compliance reports for 2019 fishing year; for years prior to 2019, personal communication with MRIP [Queried September 2020])

| 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 |

ATLANTIC STATES MARINE FISHERIES COMMISSION
REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR ATLANTIC CROAKER
(Micropogonias undulatus)

2019 FISHING YEAR



Prepared by the Plan Review Team
Drafted October 2020



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

DRAFT DOCUMENT FOR PLAN REVIEW TEAM REVIEW

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I. Status of the Fishery Management Plan

| | |
|----------------------------------|---|
| <u>Date of FMP Approval:</u> | Original FMP – October 1987 |
| <u>Amendments:</u> | Amendment 1 – November 2005 (implemented January 2006) Addendum I – March 2011 Addendum II – August 2014 Addendum III – February 2020 |
| <u>Management Areas:</u> | The Atlantic coast distribution of the resource from New Jersey through Florida |
| <u>Active Boards/Committees:</u> | South Atlantic State/Federal Fisheries Management Board; Atlantic Croaker Technical Committee, Stock Assessment Subcommittee, and Plan Review Team; South Atlantic Species Advisory Panel |

[The Fishery Management Plan \(FMP\) for Atlantic Croaker](#) was adopted in 1987 and included the states from Maryland through Florida (ASMFC 1987). In 2004, the South Atlantic State/Federal Fisheries Management Board (Board) found the recommendations in the FMP to be vague, and recommended that an amendment be prepared to define management measures necessary to achieve the goals of the FMP. The Interstate Fisheries Management Program Policy Board also adopted the finding that the original FMP did not contain any management measures that states were required to implement.

In 2002, the Board directed the Atlantic Croaker Technical Committee (TC) to conduct the first coastwide stock assessment of the species to prepare for developing an amendment. The Atlantic Croaker Stock Assessment Subcommittee developed a stock assessment in 2003, which was approved by a Southeast Data Assessment Review (SEDAR) panel for use in management in June 2004 (ASMFC 2005a). The Board quickly initiated development of an amendment and, in November 2005, approved [Amendment 1 to the Atlantic Croaker FMP](#) (ASMFC 2005b). The amendment was fully implemented by January 1, 2006.

The goal of Amendment 1 was to utilize interstate management to perpetuate the self-sustainable Atlantic croaker resource throughout its range and generate the greatest economic and social benefits from its commercial and recreational harvest and utilization over time.

Amendment 1 contains four objectives:

- 1) Manage the fishing mortality rate for Atlantic croaker to provide adequate spawning potential to sustain long-term abundance of the Atlantic croaker population.
- 2) Manage the Atlantic croaker stock to maintain the spawning stock biomass above the target biomass levels and restrict fishing mortality to rates below the threshold.
- 3) Develop a management program for restoring and maintaining essential Atlantic croaker habitat.

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

Amendment 1 expanded the management area to include the states from New Jersey through Florida. Consistent with the stock assessment completed in 2004, the amendment defined two Atlantic coast management regions: the south-Atlantic region, from Florida through South Carolina; and the mid-Atlantic region, from North Carolina through New Jersey.

Amendment 1 established biological reference points (BRPs) to define an overfished and overfishing stock status for the mid-Atlantic region only. Reliable stock estimates and BRPs for the South Atlantic region could not be developed during the 2004 stock assessment due to a lack of data. The BRPs were based on maximum sustainable yield (MSY), and included threshold and target levels of fishing mortality (F) and spawning stock biomass (SSB): F threshold = F_{MSY} (estimated to be 0.39); F target = $0.75 \times F_{MSY}$ (estimated to be 0.29); SSB threshold = $0.7 \times SSB_{MSY}$ (estimated to be 44.65 million pounds); and SSB target = SSB_{MSY} (estimated to be 63.78 million pounds). An SSB estimate below the SSB threshold resulted in an overfished status determination, and an F estimate above the F threshold resulted in an overfishing status determination. The Amendment established that the Board would take action, including a stock rebuilding schedule if necessary, should the BRPs indicate the stock is overfished or overfishing is occurring.

Amendment 1 did not require any specific measures restricting recreational or commercial harvest of Atlantic croaker. States with more conservative measures were encouraged to maintain those regulations (Table 1). The Board was able to revise Amendment 1 through adaptive management, including any regulatory and/or monitoring requirements in subsequent addenda, along with procedures for implementing alternative management programs via conservation equivalency.

The Board initiated [Addendum I to Amendment I](#) at its August 2010 meeting, following the updated stock assessment, in order to address the proposed reference points and management unit. The stock assessment evaluated the stock as a coastwide unit, rather than the two management units established within Amendment I. In approving Addendum I, the Board endorsed consolidating the stock into one management unit, as proposed by the stock assessment. In addition, Addendum I established a procedure, similar to other species, by which the Board may approve peer-reviewed BRPs without a full administrative process, such as an amendment or addendum.

In August 2014, the Board approved [Addendum II to the Atlantic Croaker FMP](#). The Addendum established the Traffic Light Approach (TLA) as the new precautionary management framework to evaluate fishery trends and develop management actions. The TLA was originally developed as a management tool for data poor fisheries. The name comes from assigning a color (red, yellow, or green) to categorize relative levels of population indicators. When a population characteristic improves, the proportion of green in the given year increases. Harvest and abundance thresholds of 30% and 60% were established in Addendum II, representing

moderate and significant concern for the fishery. If thresholds for both population characteristics achieve or exceed a threshold for a three year period, then management action is enacted.

The TLA framework replaces the management triggers stipulated in Addendum I, which dictated that action should be taken if recreational and commercial landings dropped below 70% of the previous two year average. Those triggers were limited in their ability to illustrate long-term declines or increases in stock abundance. In contrast, the TLA approach is capable of better illustrating trends in the fishery through changes in the proportion of green, yellow, and red coloring. A 2018 TC report recommended several updates to the current TLA approach (ASMFC 2018). The Board initiated an Addendum III to incorporate these updates.

In February 2020 the Board approved [Addendum III to Amendment 1](#) of the Atlantic Croaker FMP. This addenda adjusted the TLA to incorporate additional fishery-independent indices, age information, use of regional characteristics, and changes to the management triggering mechanisms. Management triggers and responses include bag limits for the recreational fishery and percentage harvest reductions from a 10 year average for the commercial fishery. The response will be defined by which percent threshold (30% or 60%) that was exceeded in any of the 3 out of 4 terminal years.

Addenda III did not add or change any management measures or requirements, unless management-triggering mechanisms are tripped. The only pre-existing requirement is for states to submit an annual compliance report by July 1st of each year that contains commercial and recreational landings as well as results from any monitoring programs that intercept Atlantic croaker.

II. Status of the Stock

The most recent stock assessment, conducted in 2017, upon peer review was not recommended for management use. Therefore, current stock status is unknown. The Peer Review Panel did not indicate problems in the Atlantic croaker fishery that would require immediate management action but did recommend continued evaluation of the fishery using the annual TLA.

The conclusions of the 2010 stock assessment (ASMFC 2010), which is the most recent assessment that was recommended by peer review for management use, were that Atlantic croaker was not experiencing overfishing and biomass had increased and fishing mortality decreased since the late 1980s. The 2010 assessment was unable to confidently determine stock status, particularly with regards to biomass, due to an inability to adequately estimate removals from discards of the South Atlantic shrimp trawl fishery. Improvements on estimation of these discards were made in the 2017 assessment, allowing the potential for shrimp trawl discards to be included as supplemental information with the annual TLA. Annual monitoring of shrimp trawl fishery discards is important because these discards represent a considerable proportion of Atlantic croaker removals, ranging from 7% to 78% annually during 1988-2008, according to the 2010 assessment (ASMFC 2010).

One of the primary reasons that the 2017 stock assessment did not pass peer review was due to conflicting signals in harvest and abundance metrics. Theoretically, increases in adult abundance should result in more fish available to be caught by the fishery; thus, fishing would be more efficient (greater catch per unit effort) and harvest would increase in a pattern similar to adult abundance. However, several of the most recent abundance indices have shown increases while harvest has declined to some of the lowest levels on record. One factor that has been identified to contribute to overestimates of adult abundance is an increase in the number of juveniles misclassified as adults in surveys that historically have typically caught adults. In response to this conflict, the Atlantic Croaker TC has recommended several changes to the annual TLA in 2019 such as additional abundance indices and survey length-composition information so that the TLA abundance metric would more accurately reflect trends in the stock.

Addendum III addressed the concerns of the TC. The addendum added indices from the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) and the South Carolina Department of Natural Resources (SCDNR) Trammel Net Survey into the adult composite characteristic index. In addition, all surveys used revised adult abundance indices and not have an established reference period of 2002-2012. Regional metrics were also used to characterize the fisheries north and south of the Virginia-North Carolina state line. The ChesMMAP and the NEFSC surveys will be used to characterize abundance north of the state line, and SCDNR Trammel Net and SEAMAP surveys will be used to characterize abundance south of the state line.

III. Status of the Fishery

This report includes updated recreational estimates from the Marine Recreational Information Program's transition to the mail-based Fishing Effort Survey (FES) on July 1, 2018. 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 2018.

Total Atlantic croaker harvest from New Jersey through the east coast of Florida in 2019 is estimated at 4 million pounds (Tables 2 and 3, Figure 1). This represents a 91% decline in total harvest since the peak of 47.4 million pounds in 2003 (92% commercial decline, 90% recreational decline). The commercial and recreational fisheries harvested 53% and 46% of the 2019 total, respectively.

Atlantic coast commercial landings of Atlantic croaker exhibit a cyclical pattern, with low harvests in the 1960s to early 1970s and the 1980s to early 1990s, and high harvests in the mid-to-late 1970s and the mid-1990s to early 2000s (Figure 1). Commercial landings increased from a low of 3.7 million pounds in 1991 to 28.6 million pounds in 2001; however, landings have declined every year since 2010 to 2.1 million pounds in 2019, the lowest of the time series (1950-2019). Within the management unit, the majority of 2019 commercial landings came from North Carolina (66%) and Virginia (30%).

From 1981-2019, recreational landings of Atlantic croaker from New Jersey through Florida have varied by count between 5.6 million fish and 36.2 million fish and by weight between 1.8 million pounds and 18.9 million pounds (Tables 3 and 4, Figure 2). Landings generally increased until 2003, after which they showed a declining trend through 2019. The 2019 landings are estimated at 5.6 million fish and 1.8 million pounds, the lowest recreational harvest on record. Virginia was responsible for 54% of the 2019 recreational landings, in numbers of fish, followed by Florida (14%).

The number of recreational releases generally increased over the time series until 2013, after which numbers of releases have generally decreased through 2019 (Figure 2). However, percentage of released recreational catch has shown a slight increasing trend from the 1990s through 2019. In 2019, anglers released 19.6 million fish, a slight increase from the 18.2 million fish released in 2018. Anglers released an estimated 78% of the recreational croaker catch in 2019, the highest percentage on record (Figure 2).

IV. Status of Assessment Advice

A statistical catch-at-age (SCA) model was used in the 2010 Atlantic croaker stock assessment (ASMFC 2010). This model combines catch-at-age data from the commercial and recreational fisheries with information from fishery-independent surveys and biological information such as growth rates and natural mortality rates to estimate the size of each age class and the exploitation rate of the population. The assessment was peer reviewed by a panel of experts in conjunction with the Southeast Data, Assessment, and Review (SEDAR) process.

The benchmark stock assessment conducted in 2017 was not recommended for management use due to uncertainty in biomass estimates resulting from conflicting signals among abundance indices and catch time series as well as sensitivity of model results to assumptions and model inputs. Specifically, model-estimated values of stock size, fishing mortality, and biological reference points are too uncertain for use; however, the trends in model-estimated parameters and ratio-based fishing F reference points are considered reliable. One noted improvement in this assessment was in the estimation of Atlantic croaker discards by the shrimp trawl fishery. The Review Panel recommended incorporation of shrimp trawl discard estimates into the annual monitoring of Atlantic croaker through the TLA. The TC recommended several changes to the TLA that would help resolve some of the conflict between harvest and abundance signals which resulted in the creation of Addendum III. The Board approved Addendum III in February 2020, and the TLA reports will incorporate the changes.

V. Status of Research and Monitoring

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

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Fishery-Dependent Monitoring

- New Jersey: initiated biological monitoring of commercially harvested Atlantic croaker in 2006 in conjunction with ACCSP, but was unable to do so in 2019 due to lack of commercial trips. Recreational MRIP length sampling indicated the majority of harvest was 220-229 mm FL.
- Delaware: collects trip-based information on pounds landed, area fished, effort, and gear type data through mandatory monthly state logbook reports submitted by fishermen.
- Maryland: commercial pound net fishery biological sampling; seafood dealer sampling
- PRFC: has a mandatory commercial harvest daily reporting system, with reports due weekly.
- Virginia: commercial fishery biological sampling (5,357 length measurements, 5,342 weight measurements, 227 otolith ages, and 348 sex determinations in 2019)
- North Carolina: commercial fishery biological sampling since 1982 for length (2019 n=4,427), weight, otolith, sex determination, and reproductive condition.
- South Carolina: recreational fishery biological sampling via MRIP and a SCDNR-managed mandatory trip reporting system for licensed charter boat operators. In 2013, SCDNR took over its portion of MRIP data collection.
- Georgia: collects biological information, including length, sex, and maturity stage, through the Marine Sportfish Carcass Recovery Project (6 fish in 2019)

Fishery-Independent Monitoring

- New Jersey: 3 nearshore ocean (within 12 nm) juvenile trawl surveys (New Jersey Ocean Trawl Survey, 1988-present: 2019 CPUE (0.43) was well below time-series average (1.89); nearshore Delaware Bay juvenile trawl survey, 1991-present: 2019 survey index (0.54) was well below time series average (4.11); Delaware River juvenile seine survey, 1980-present: 2019 survey index (0.04) was well below time series average (0.21).
- Delaware: offshore Delaware Bay adult finfish trawl survey (1990-present; 2019 #/tow = 1.42; 87% decrease in relative abundance from the 2018 index, below mean for time series); nearshore Delaware Bay juvenile finfish trawl survey (1980-present; 2019 index decreased from 5.43 in 2018 to 3.89; Inland Bays index decreased from 2.41 in 2018 to 1.59 in 2019).
- Maryland: summer gill net survey was initiated in 2013 on lower Choptank (43 fish were captured in 2019); Atlantic coast bays juvenile otter trawl survey (standardized from 1989-present; 2019 GM of 2.03 fish/hectare is the first value above the long term mean since 2012 of the 30-year time series); Chesapeake Bay juvenile trawl index (standardized from 1989-present; CPUE increased from 1.13 fish/tow in 2018 to 4.895 in 2019).
- PRFC: Maryland DNR conducts an annual juvenile beach haul seine survey in the Potomac River (1954-present; YOY GM increased slightly from 0.00 in 2018 to 0.05 in 2019).
- Virginia: Virginia Institute of Marine Science (VIMS) Juvenile Finfish and Blue Crab Trawl Survey (1988-present; 2019 index was 15.64, which is up from the 2018 value of 0.61).
- North Carolina: Pamlico Sound juvenile trawl survey (1987-present; 2019 juvenile abundance index (mean number of individuals/tow) was 1,111, a 712% increase from 2018); Pamlico Sound gill net survey (2001-present; 2019 CPUE 0.4 fish per sample, below time series mean)

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- South Carolina: SEAMAP shallow water (15-30 ft) trawl survey from Cape Hatteras to Cape Canaveral (1989-present; 2019 CPUE increased by 41.2% from 2018); inshore estuarine trammel net survey for adults (May-September, 1991-present; 2019 CPUE decreased 12.7% from 2018); estuarine electroshock survey for juveniles (2001-present; 2019 CPUE increased by 216% from 2018, to just above the long term mean); SCECAP estuarine trawl survey (1999-present, primarily targets juveniles, 2019: 96.8 #/hectare increased from 41.9 #/hectare in 2018, 2019 is the second highest catch level in the data series).
- Georgia: Marine Sportfish Population Health Survey (trammel and gill net surveys in the Altamaha River Delta and Wassaw estuary, 2002-present; 2019 trammel net index (GM #/standard net set): 0.1, gill net index: 0.5); Ecological Monitoring Survey (trawl, 2003-present; 2019 index (GM #/standard trawl) was 11.6).
- Florida: YOY seine survey (2002-present; 2019 index decreased by 47% from 2018); sub-adult/adult haul seine survey (2001-present; 2019 index value decreased by 9% from 2018).

The Northeast Fishery Science Center (NEFSC) performs a randomly stratified groundfish survey along the U.S. east coast. Atlantic croaker are one of the main species caught throughout much of the survey area and, since the surveys started in 1972, it provides a long term data set. Regionally, mean CPUE (catch-per-unit-effort) of Atlantic croaker has increased from north to south. Since 1994, there has been an increase in annual catch variability. The NEFSC survey was not carried out in 2017 due to mechanical issues with the RV Bigelow. Catch levels in 2019 (269.7 fish per tow) declined 31.5% from 2018 (394 fish per tow) and dropped below the long term mean (498 fish per tow) for the third year in a row. The CPUE for 2017 was estimated as the mean of 2015-2016 and 2017 as a place holder in the index. The estimated CPUE for 2017 (457.9 fish per tow) was just below the long term mean.

VI. Status of Management Measures and Issues

Fishery Management Plan

Amendment 1 was fully implemented by January 1, 2006, and provided the management plan for the 2009 fishing year. There are no interstate regulatory requirements for Atlantic croaker. Should regulatory requirements be implemented in the future, all state programs must include law enforcement capabilities adequate for successfully implementing the regulations. Addendum I to Amendment 1 was initiated in August 2010 and approved in March 2011, in order to 1) revise the biological reference points to be ratio-based, and 2) remove the distinction of two regions within the management unit, based on the results of the 2010 stock assessment. Addendum II was approved August 2014 and established the TLA management framework for Atlantic croaker in order to better illustrate long-term trends in the fishery. Addendum III was approved February 2020 and adjusted management through the TLA by incorporating additional fishery-independent indices, age information, use of regional characteristics, and changes to the management-triggering mechanisms.

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Traffic Light Approach

Analysis of the harvest composite index for 2019 shows that the population characteristic tripped for a fourth consecutive year at the 30% threshold in the Mid-Atlantic (Figure 3) and for the seventh consecutive year above the 30% threshold in the South Atlantic (Figure 4). The mean proportion of red color in the Mid-Atlantic from 2017-2019 was 68.3%, with a red proportion exceeding the 60% threshold in 2018 and 2019. The mean proportion of red color in the South Atlantic from 2017-2019 was 46.2%. The harvest composite index was comprised of commercial and recreational landings.

The abundance composite TLA index was broken into the two regional components based on age composition. Due to a delay in recalibration of the ChesMMAAP survey, which is used in the annual TLA reviews, no data points were available for Atlantic croaker for 2019 for juvenile and adult abundance indices for the Mid-Atlantic region. Even without data points for 2019, the Mid-Atlantic adult composite index was generated from the NEFSC and ChesMMAAP surveys and has been above the 30% threshold since 2008 (Figure 5). Atlantic adult composite index was generated from SEAMAP and SCDNR trammel net survey and had a relatively high proportion of green (Figure 6).

The TLA harvest composite characteristic triggered in both the Mid-Atlantic and South Atlantic in 2019 at the 30% threshold for three of the last four consecutive years. Being above the 30% threshold indicates moderate concern. For the Mid-Atlantic, the adult composite characteristics exceeded 30% in 2019, hitting the requirement of exceeding the threshold for three of the four previous years. The South Atlantic adult composite characteristics did not exceed the 30% level in 2019.

Overall, there is a continued trend of disconnect between the harvest and abundance indices with the harvest metric exhibiting a decreasing trend, while the abundance metric had an increasing trend, specifically in the South Atlantic. However, because harvest indices for both regions and abundance indices for the Mid-Atlantic were above 30% in 3 of the last 4 years, management response as outlined in Addendum III management guidelines will be enacted. All non-*de minimis* states will be required to implement a 50 fish per person per day bag limit and a 1% reduction in commercial harvest from their 10 year average.

De Minimis Requests

States are permitted to request *de minimis* status if, for the preceding three years for which data are available, their average commercial landings or recreational landings (by weight) constitute less than 1% of the coastwide commercial or recreational landings for the same three year period. A state may qualify for *de minimis* in either its recreational or commercial sector, or both, but will only qualify for exemptions in the sector(s) that it qualifies for as *de minimis*. Amendment 1 does not include any compliance requirements other than annual state reporting, which is still required of *de minimis* states, thus *de minimis* status does not exempt states from any measures.

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In the annual compliance reports, the following states requested *de minimis* status: New Jersey (commercial and recreational), Delaware (commercial fishery), South Carolina (commercial fishery), Georgia (commercial fishery), and Florida (commercial fishery). The commercial and recreational *de minimis* criteria for 2019 are based on 1% of the average coastwide 2017-2019 landings in each fishery: 46,665 pounds for the commercial fishery and 46,176 pounds for the recreational fishery. The Delaware, South Carolina, and Georgia commercial fisheries all qualify for *de minimis* status, but landings are confidential. The Florida commercial fishery does not qualify for *de minimis* status with a three-year average of 51,141 pounds (1.6% of the coastwide three-year average). However, given Florida's longstanding *de minimis* status and the small margin above the average landings threshold, the Atlantic Croaker Plan Review Team (PRT) recommends Florida maintain *de minimis* status.

Changes to State Regulations

No state regulation changes in 2019

Atlantic Croaker Habitat

In winter of 2017, the ASMFC Habitat Committee released *Atlantic Sciaenid Habitats: A Review of Utilization, Threats, and Recommendations for Conservation, Management, and Research*, which outlines the habitat needs of Atlantic croaker at different life stages (egg, larval, juvenile, adult). This report also highlights threats and uncertainties facing these ecological areas and identifies Habitat Areas of Particular Concern. It can be found online at:

http://www.asmfc.org/files/Habitat/HMS14_AtlanticSciaenidHabitats_Winter2017.pdf.

Bycatch Reduction

Atlantic croaker is subject to both direct and indirect fishing mortality. Historically, croaker ranked as one of the most abundant bycatch species of the south Atlantic shrimp trawl fishery, resulting in the original FMP's recommendation that bycatch reduction devices (BRDs) be developed and required in the shrimp trawl fishery. Since then, the states of North Carolina through Florida have all enacted requirements for the use of BRDs in shrimp trawl nets in state waters, reducing croaker bycatch from this fishery (ASMFC 2010). However, bycatch and discard monitoring from the shrimp trawl fishery have historically been inadequate, resulting in a major source of uncertainty for assessing this stock, as well as other important Mid- and South Atlantic species. Most of the discarded croaker are age-0 and thus likely have not yet reached maturity (ASMFC 2010). The North Carolina Division of Marine Fisheries conducted a two-year study, published in 2015, to collect bycatch data from state shrimp trawlers (Figure 7). It found that Atlantic croaker represent between 34-49% of the total observed finfish bycatch by weight in estuarine waters and between 20-42% in ocean waters. The at-net mortality for Atlantic croaker was found to be 23% (Brown 2015). These data will be valuable for incorporating estimates of removals in future stock assessments.

Atlantic croaker are also discarded from other commercial fishing gears, primarily due to market pressures and few restrictions on croaker harvest at the state level. The National Oceanic and Atmospheric Administration (NOAA) Fisheries Pelagic Observer Program provides data to estimate these discards for use in assessments; however, the time series is limited and

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only discards from gill nets and otter trawls could be estimated for the 2010 assessment based on the available data. Since 1988, estimated discards have fluctuated between 94 and 15,176 mt without trend, averaging 2,503 mt (ASMFC 2010).

Atlantic croaker is also a major component of the scrap/bait fishery. Landings from this fishery are not reported at the species level, except in North Carolina, which has a continuous program in place to sample these landings and enable estimation of croaker scrap landings for use in the stock assessment. As part of the 2010 stock assessment, North Carolina estimated the scrap/bait landings, which have declined in recent years, from a high of 1,569 mt in 1989 to a low of 84 mt in 2008, primarily due to restrictions placed on fisheries producing the highest scrap/bait landings (ASMFC 2010). Regulations instituted by North Carolina include a ban on flynet fishing south of Cape Hatteras, incidental finfish limits for shrimp and crab trawls in inside waters, minimum mesh size restrictions in trawls, and culling panels in long haul seines.

South Carolina has also begun a state monitoring program to account for bait landings. The state initiated a bait harvester trip ticket program for all commercial bait harvesters licensed in South Carolina. The impetus for this program is to track bait usage of small sciaenid species (croaker, spot, and whiting) as well as other important bait species.

Several states have implemented other commercial gear requirements that further reduce bycatch and bycatch mortality, while others continue to encourage the use of the BRD devices. NOAA Fisheries published a notice on June 24, 2011 for public scoping in the Federal Register to expand the methods for reducing bycatch interactions with sea turtles, which may have additional effects on the bycatch of finfish like Atlantic croaker in trawls (76 FR 37050). Continuing to reduce the quantity of sub-adult croaker harvested should increase spawning stock biomass and yield per recruit.

Atlantic croaker are also subject to recreational discarding. The percentage of Atlantic croaker released alive by recreational anglers has generally increased over time. Discard mortality was estimated to be 10% for the 2010 stock assessment (ASMFC 2010). The use of circle hooks and appropriate handling techniques can help reduce mortality of released fish.

VII. Implementation of FMP Compliance Requirements for 2020

The PRT finds that all states have fulfilled the requirements of Amendment 1.

VIII. Recommendations

Management and Regulatory Recommendations

- Consider approval of the *de minimis* requests from New Jersey, Delaware, South Carolina, Georgia, and Florida for their commercial fisheries.
- Encourage the use of circle hooks to minimize recreational discard mortality.
- Consider the basic research and monitoring information needed for informed management in light of the budgetary constraints limiting all state governments.

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Research and Monitoring Recommendations

High Priority

- Increase observer coverage for commercial discards, particularly the shrimp trawl fishery. Develop a standardized, representative sampling protocol for observers to use to increase the collection of individual lengths and ages of discarded finfish.
- Describe the coast-wide distribution, behavior, and movement of croaker by age, length, and season, with emphasis on collecting larger, older fish.
- Continue state and multi-state fisheries-independent surveys throughout the species range and subsample for individual lengths and ages. Ensure NEFSC trawl survey continues to take lengths and ages. Examine potential factors affecting catchability in long-term fishery independent surveys.
- Investigate environmental covariates in stock assessment models including climate cycles (e.g., Atlantic Multi-decadal Oscillation, AMO, and El Niño Southern Oscillation, El Niño) and recruitment and/or year class strength, spawning stock biomass, stock distribution, maturity schedules, and habitat degradation.
- Continue to develop estimates of length-at-maturity and year-round reproductive dynamics throughout the species range. Assess whether temporal or density-dependent shifts in reproductive dynamics have occurred.
- Re-examine historical ichthyoplankton studies for an indication of the magnitude of estuarine and coastal spawning, as well as for potential inclusion as indices of spawning stock biomass in future assessments. Pursue specific estuarine data sets from the states (NJ, VA, NC, SC, DE, MD) and coastal data sets (MARMAP, EcoMon).
- Investigate the relationship between estuarine nursery areas and their proportional contribution to adult biomass, i.e., are select nursery areas along Atlantic coast ultimately contributing more to SSB than others, reflecting better quality juvenile habitat?

Medium Priority

- Conduct studies of discard mortality for recreational and commercial fisheries by each gear type in regions where removals are highest.
- In the recreational fishery, develop sampling protocol for collecting lengths of discarded finfish and collect otolith age samples from retained fish.
- Encourage fishery-dependent biological sampling, with proportional landings representative of the distribution of the fisheries. Develop and communicate clear protocols on truly representative sampling.
- Quantify effects of BRDs and TEDs implementation in the shrimp trawl fishery by examining their relative catch reduction rates on Atlantic croaker.
- Utilize NOAA Fisheries Ecosystem Indicators bi-annual reports to consider folding indicators into the assessment; identify mechanisms for how environmental indicators affect the stock.
- Encourage efforts to recover historical landings data, determine whether they are available at a finer scale for the earliest years than are currently reported.
- Collect data to develop gear-specific fishing effort estimates and investigate methods to develop historical estimates of effort.
- Develop gear selectivity studies for commercial fisheries with emphasis on age 1+ fish.

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- Conduct studies to measure female reproductive output at size and age (fecundity, egg and larval quality) and impact on assessment models and biomass reference points.
- Develop and implement sampling programs for state-specific commercial scrap and bait fisheries in order to monitor the relative importance of Atlantic croaker. Incorporate biological data collection into the program.

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X. Figures

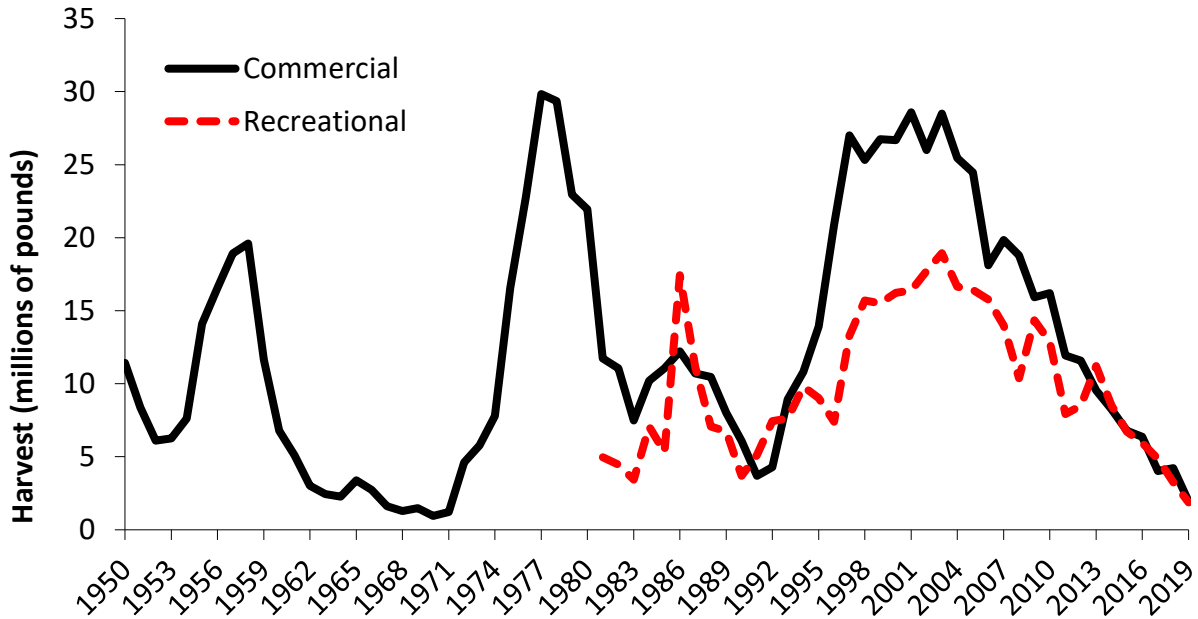


Figure 1. Atlantic croaker commercial and recreational landings (pounds) from 1950-2019.

(See Tables 2 and 3 for source information. Commercial landings estimate for 2019 is preliminary. Reliable recreational landings estimates are not available prior to 1981. Recreational landings estimates are based on the mail-based Fishing Effort Survey.)

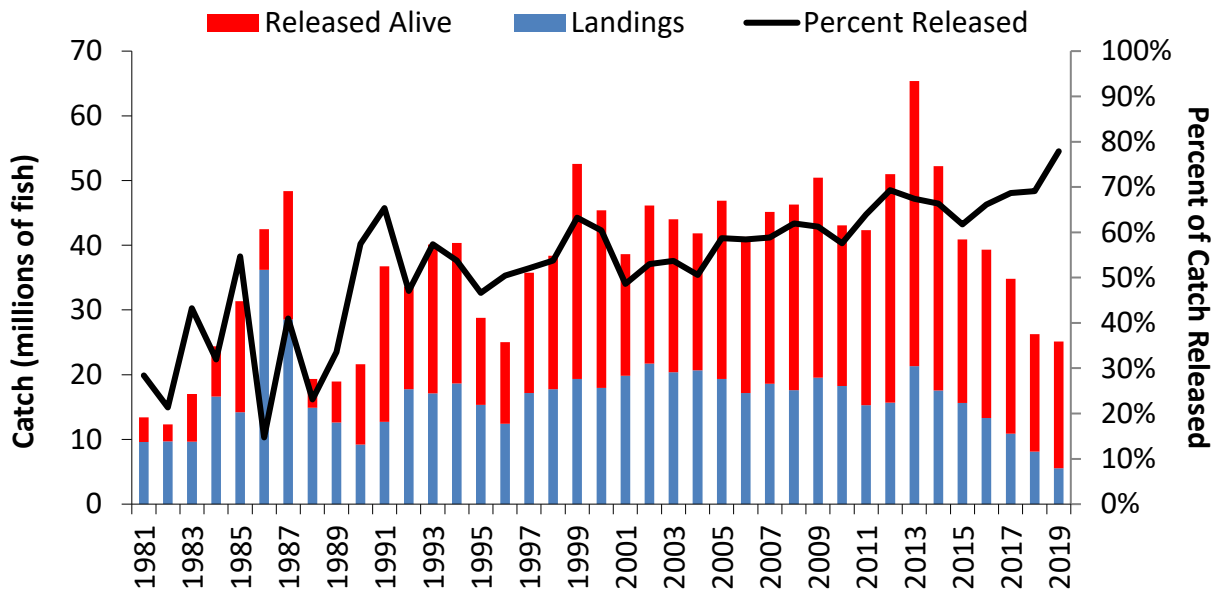


Figure 2. Recreational catch (landings and alive releases, in numbers) and the percent of catch that is released, 1981-2019, based on the mail-based Fishing Effort Survey calibration. (See Tables 4 and 5 for values and source information.)

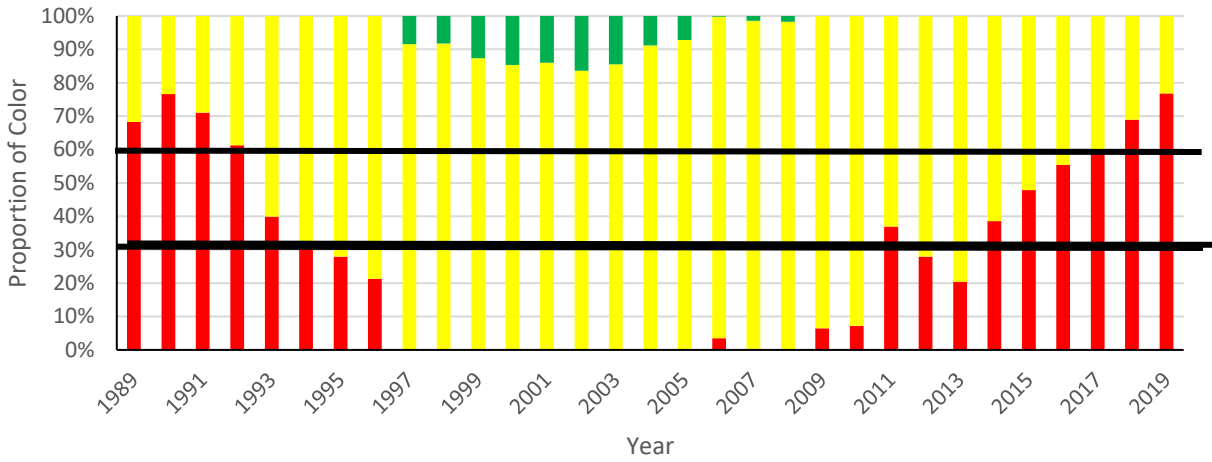


Figure 3. Annual color proportions for harvest composite TLA of Mid-Atlantic region (NJ-VA) for Atlantic croaker recreational and commercial landings

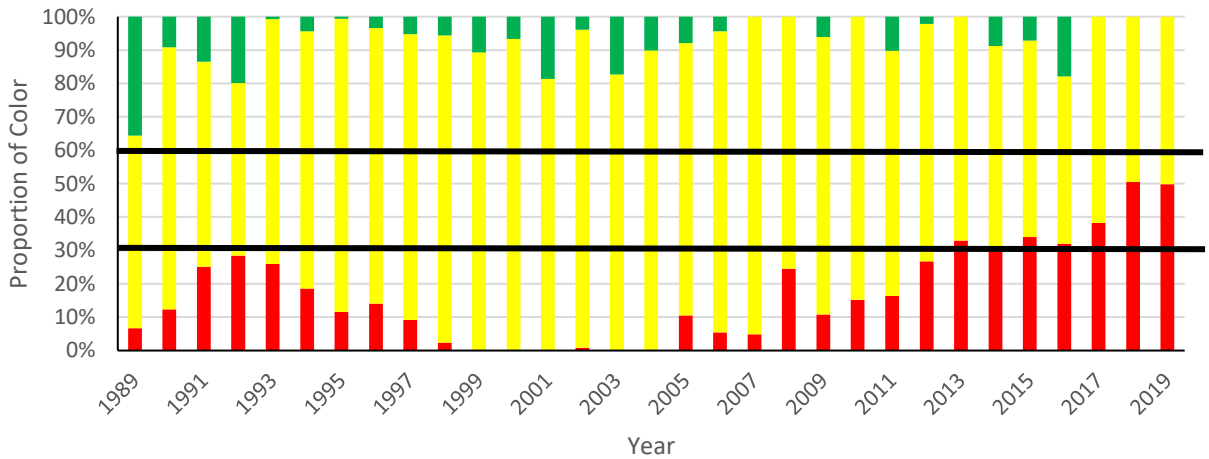


Figure 4. Annual color proportions for harvest composite TLA of South Atlantic region (NC-FL) for Atlantic croaker recreational and commercial landings using a 2002-2012 reference period

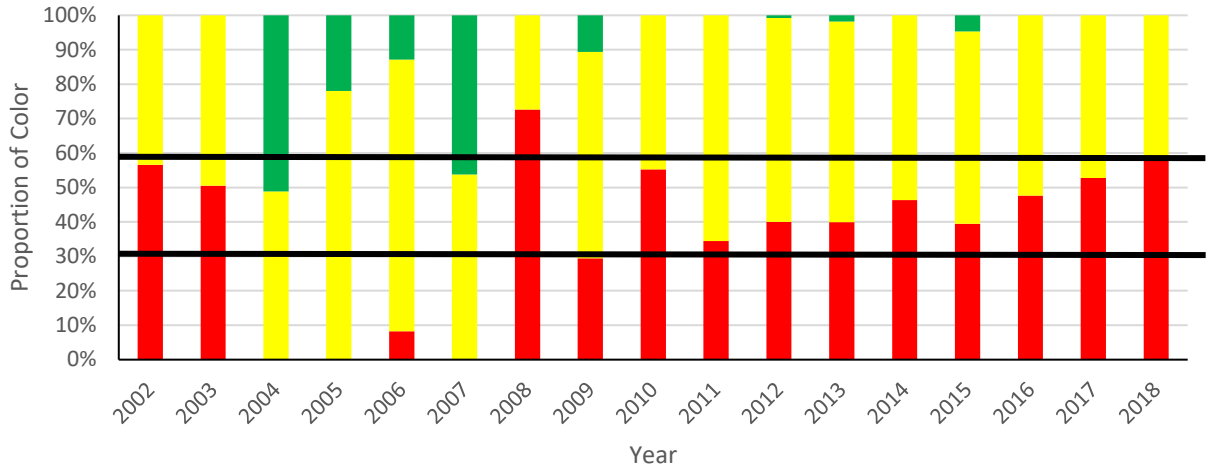


Figure 5. Adult (age 2+) Atlantic croaker TLA composite characteristic index for the Mid-Atlantic (NEFSC and ChesMMAP surveys)

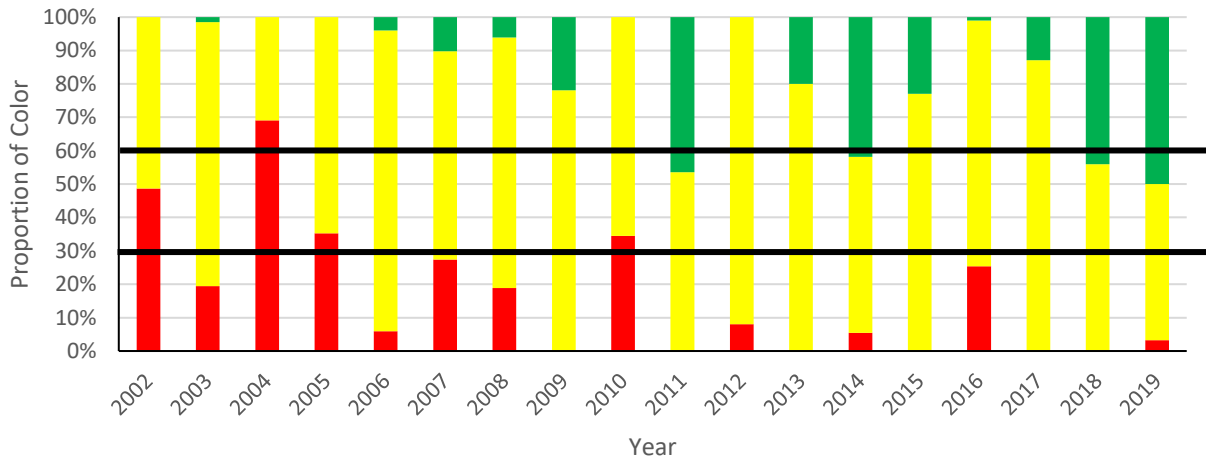


Figure 6. Adult (age 2+) Atlantic croaker TLA composite characteristic index for the South Atlantic (SEAMAP and SCDNR trammel survey)

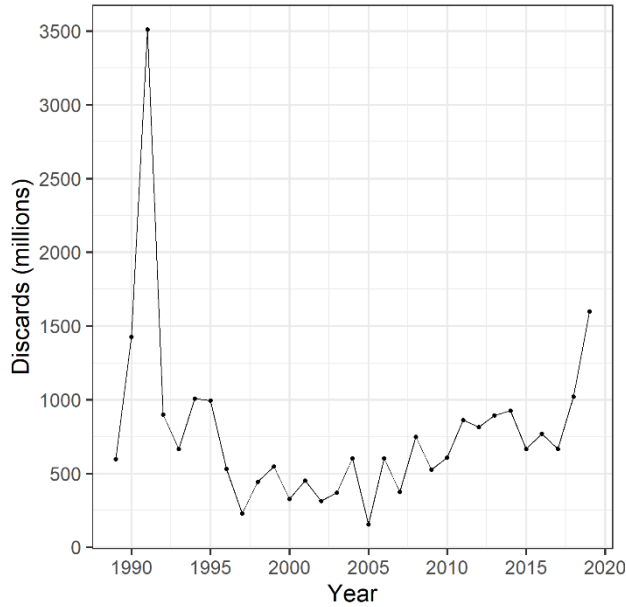


Figure 7. Discard of Atlantic croaker in the South Atlantic Shrimp Trawl Fishery

**XI.
Tables**

Table 1. Summary of state regulations for Atlantic croaker in 2019.

| State | Recreational | Commercial |
|-------|--|--|
| NJ | none | otter/beam trawl mesh restriction for directed croaker harvest (>100 lbs in possession) |
| DE | 8" minimum; recreational gill nets (up to 200 ft.) with license | 8" minimum |
| MD | 9" min, 25 fish/day, charter boat logbooks | 9" minimum; open 3/16 to 12/31 |
| PRFC | 25 fish/day | pound net season: 2/15 to 12/15 |
| VA | none | none |
| NC | recreational use of commercial gears with license and gear restrictions | none |
| SC | mandatory for-hire logbooks, small Sciaenidae species aggregate bag limit of 50 fish/day | none |
| GA | 25 fish/day | 25 fish/day limit except for trawlers harvesting shrimp for human consumption (no limit) |
| FL | none | none |

* A commercial fishing license is required to sell croaker in all states with fisheries. For all states, general gear restrictions affect commercial croaker harvest.

Table 2. Commercial harvest (pounds) of Atlantic croaker by state, 2010-2019.

(Estimates for 2019 are preliminary. Sources: 2020 state compliance reports for 2019 fishing year and for years prior to 2019, personal communication with ACCSP, Arlington, VA, except PRFC [compliance reports only].)

| Year | NJ | DE | MD | PRFC | VA | NC | SC | GA | FL | Total |
|------|---------|----|---------|---------|-----------|-----------|-----|----|--------|------------|
| 2010 | 342,116 | C | 542,233 | 162,571 | 7,796,179 | 7,312,159 | C | | 37,229 | 16,199,394 |
| 2011 | 458,397 | C | 714,347 | 243,196 | 5,415,432 | 5,054,186 | C | | 47,649 | 11,933,396 |
| 2012 | 363,381 | C | 915,432 | 273,849 | 6,842,005 | 3,106,616 | C | | 74,527 | 11,582,978 |
| 2013 | 332,813 | C | 820,777 | 130,285 | 6,237,602 | 1,927,938 | C | | 76,463 | 9,538,901 |
| 2014 | 265,166 | C | 443,661 | 177,777 | 4,697,381 | 2,629,908 | 247 | | 45,587 | 8,261,609 |
| 2015 | 81,311 | C | 294,038 | 118,996 | 4,426,957 | 1,819,067 | C | | 39,096 | 6,784,146 |
| 2016 | 55,210 | C | 101,949 | 168,889 | 3,825,737 | 2,164,015 | 302 | | 57,538 | 6,374,527 |
| 2017 | 1,068 | C | 42,958 | 114,319 | 2,822,005 | 1,007,963 | 256 | | 43,033 | 4,032,941 |
| 2018 | C | C | 44,306 | 16,561 | 2,450,984 | 1,643,607 | C | | 54,409 | 4,210,715 |
| 2019 | C | C | 2,865 | C | 846,007 | 1,277,829 | C | | 68,179 | 2,194,902 |

C: Confidential data

Table 3. Recreational harvest (pounds) of Atlantic croaker by state, 2010-2019. (Sources: 2020 state compliance reports for 2019 fishing year and for years prior to 2019, personal communication with ACCSP, Arlington, VA)

| Year | NJ | DE | MD | VA | NC | SC | GA | FL | Total |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|
| 2010 | 79,889 | 106,268 | 2,472,032 | 9,295,413 | 638,817 | 27,184 | 35,593 | 209,519 | 12,864,715 |
| 2011 | 50,153 | 123,487 | 1,188,916 | 4,584,599 | 360,390 | 583,280 | 38,219 | 995,506 | 7,924,550 |
| 2012 | 259,645 | 147,737 | 1,980,417 | 4,664,264 | 307,338 | 30,149 | 29,815 | 1,063,337 | 8,482,702 |
| 2013 | 1,637,516 | 253,447 | 1,581,384 | 6,442,166 | 453,881 | 84,248 | 89,781 | 642,887 | 11,200,818 |
| 2014 | 750,580 | 427,615 | 1,265,217 | 4,354,046 | 758,751 | 104,434 | 138,423 | 712,090 | 8,511,554 |
| 2015 | 263,749 | 189,320 | 871,596 | 3,514,410 | 557,735 | 181,909 | 248,431 | 881,185 | 6,708,335 |
| 2016 | 7,133 | 10,959 | 407,010 | 2,998,022 | 443,728 | 81,896 | 116,313 | 1,893,203 | 5,958,264 |
| 2017 | 0 | 26,441 | 238,659 | 3,383,057 | 237,160 | 310,621 | 100,565 | 555,389 | 4,851,892 |
| 2018 | 34,125 | 5,859 | 191,854 | 2,245,518 | 164,644 | 81,251 | 83,258 | 445,663 | 3,252,172 |
| 2019 | 973 | 23,973 | 38,895 | 995,491 | 224,337 | 133,227 | 97,791 | 358,941 | 1,873,628 |

Table 4. Recreational harvest (numbers) of Atlantic croaker by state, 2010-2019. (Sources: 2020 state compliance reports for 2019 fishing year and for years prior to 2019, personal communication with ACCSP, Arlington, VA)

| Year | NJ | DE | MD | VA | NC | SC | GA | FL | Total |
|-------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|--------------|
| 2010 | 142,887 | 207,601 | 2,994,889 | 12,961,723 | 1,280,446 | 88,399 | 121,252 | 470,168 | 18,267,365 |
| 2011 | 91,014 | 212,613 | 1,530,723 | 8,891,276 | 873,659 | 949,132 | 129,941 | 2,593,963 | 15,272,321 |
| 2012 | 830,891 | 202,283 | 2,565,599 | 8,786,350 | 848,495 | 132,264 | 104,944 | 2,190,268 | 15,661,094 |
| 2013 | 2,707,410 | 530,236 | 2,308,987 | 12,517,286 | 1,300,804 | 336,140 | 264,984 | 1,332,465 | 21,328,324 |
| 2014 | 852,733 | 806,256 | 2,197,125 | 9,533,829 | 1,935,961 | 600,482 | 289,781 | 1,359,207 | 17,576,096 |
| 2015 | 339,021 | 334,676 | 1,738,576 | 8,024,381 | 1,437,019 | 555,263 | 790,014 | 2,429,723 | 15,648,673 |
| 2016 | 8,236 | 24,546 | 659,318 | 7,276,719 | 1,109,570 | 268,470 | 402,254 | 3,553,777 | 13,302,890 |
| 2017 | 0 | 65,606 | 423,790 | 7,644,516 | 666,930 | 765,227 | 371,301 | 969,146 | 10,906,516 |
| 2018 | 104,321 | 12,370 | 305,469 | 5,472,329 | 472,917 | 335,833 | 241,382 | 1,176,999 | 8,121,620 |
| 2019 | 3,031 | 53,048 | 69,771 | 3,055,510 | 651,268 | 593,475 | 332,073 | 801,751 | 5,559,927 |

Table 5. Recreational releases (number) of Atlantic croaker by state, 2010-2019. (Sources: 2020 state compliance reports for 2019 fishing year and for years prior to 2019, personal communication with ACCSP, Arlington, VA)

| Year | NJ | DE | MD | VA | NC | SC | GA | FL | Total |
|-------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|--------------|
| 2010 | 380,916 | 1,056,528 | 3,060,983 | 13,470,836 | 4,571,287 | 621,497 | 651,984 | 1,014,552 | 24,828,583 |
| 2011 | 252,419 | 214,603 | 937,220 | 14,160,124 | 7,005,152 | 1,187,686 | 748,696 | 2,559,976 | 27,065,876 |
| 2012 | 3,336,964 | 1,036,383 | 7,090,976 | 15,140,369 | 3,878,710 | 1,070,703 | 781,302 | 2,999,225 | 35,334,824 |
| 2013 | 2,980,744 | 1,811,661 | 7,557,223 | 18,480,099 | 6,729,556 | 3,754,143 | 1,361,943 | 1,265,571 | 44,025,744 |
| 2014 | 703,031 | 1,396,970 | 2,806,693 | 10,314,405 | 10,347,332 | 4,742,718 | 2,057,898 | 2,265,961 | 34,635,008 |
| 2015 | 240,840 | 309,389 | 1,236,293 | 6,815,343 | 9,632,560 | 3,236,774 | 1,320,939 | 2,451,253 | 25,243,391 |
| 2016 | 139,085 | 390,655 | 726,662 | 6,993,470 | 7,254,382 | 5,233,835 | 1,178,630 | 4,073,001 | 25,989,720 |
| 2017 | 152,540 | 230,455 | 2,829,255 | 8,464,305 | 4,631,445 | 4,755,853 | 1,059,539 | 1,770,846 | 23,894,238 |
| 2018 | 144,637 | 85,424 | 203,081 | 5,359,179 | 4,311,368 | 5,568,892 | 1,403,560 | 1,072,381 | 18,148,522 |
| 2019 | 33,333 | 101,523 | 1,243,785 | 6,642,685 | 3,634,211 | 3,768,288 | 1,893,287 | 2,259,705 | 19,576,817 |