Atlantic States Marine Fisheries Commission

Sciaenids Management Board

August 7, 2024
11:30 a.m. – 12:30 p.m.

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.

1.	Welcome/Call to Order *(D. Haymans)*	11:30 a.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from April 2024	11:30 a.m.
3.	Public Comment	11:35 a.m.
4.	Review 2024 Traffic Light Analyses for Spot and Atlantic Croaker *(D. Franco/H. Rickabaugh)* **Possible Action** • Technical Committee Recommendations	11:45 a.m.
5.	Consider Red Drum and Atlantic Croaker Fishery Management Plan Reviews and State Compliance for the 2023 Fishing Year (*T. Bauer*) **Action**	12:15 p.m.
6.	Progress Update on Red Drum, Atlantic Croaker, and Spot Benchmark Stock Assessments (*J. Kipp*)	12:25 p.m.
7.	Other Business/Adjourn	12:30 p.m.

The meeting will be held at The Westin Crystal City (1800 Richmond Highway, Arlington, VA; 703.486.1111) and via webinar; click here for details

MEETING OVERVIEW

Sciaenids Management Board
August 7, 2024
11:30 a.m. – 12:30 p.m.

Chair: Doug Haymans (GA) Assumed Chairmanship: 02/24	Technical Committee Chairs: Black Drum: Harry Rickabaugh (MD) Atlantic Croaker: Vacant Red Drum: Ethan Simpson (VA) Spot: Harry Rickabaugh (MD)	Law Enforcement Committee Representative: Col. Matthew Rogers (VA)
Vice Chair: Shanna Madsen	Advisory Panel Chair: Craig Freeman (VA)	Previous Board Meeting: April 30, 2024
Voting Members: NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS (10 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from April 2024

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.

4. Review 2024 Traffic Light Analyses for Spot and Atlantic Croaker (11:45 a.m.-12:15 p.m.) Possible Action

Background

- The Traffic Light Analyses (TLAs) are updated annually for both spot and Atlantic croaker to assess changes to the population in non-benchmark stock assessment years.
- The 2020 TLA triggered management action at the level of moderate concern. Addendum III states management measures set in response to any trigger must remain in place for at least two years for spot (2021-2022) and three years for Atlantic croaker (2021-2023).
- Missing survey data which prevented re-evaluation of management measures for both species in previous years is now available. In April 2024, the Sciaenids Management Board directed the Spot and Atlantic Croaker TCs to conduct abbreviated TLAs with data through 2023 for both species, focusing on updating only the harvest and abundance composite metrics used to make management decisions, and not the supplemental information which has been provided in the past.
- The Spot and Atlantic Croaker TCs met in June to discuss the results of the 2024 TLAs and make recommendations on how to proceed with management for these two species. The Spot and Croaker TCs recommended maintaining current management measures for both species (**Briefing Materials**).

Presentations

- Review of 2024 Traffic Light Analyses of the 2023 fishing year for Atlantic Croaker and Spot by D. Franco and H. Rickabaugh.

Board actions for consideration at this meeting

- Consider Spot Addendum III management measures.
- Consider Atlantic Croaker Addendum III management measures.

5. Consider Red Drum and Atlantic Croaker Fishery Management Plan Reviews and State Compliance for the 2023 Fishing Year (12:15-12:25 p.m.)

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 continued *de minimis* status (**Briefing Materials**).
- 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 has requested *de minimis* status for both their recreational and commercial fisheries, and Delaware, South Carolina, and Georgia requested *de minimis* status for their commercial fisheries (**Briefing Materials**).

Presentations

- FMP Reviews for Red Drum and Atlantic Croaker by T. Bauer.

Board actions for consideration at this meeting

- Consider approval of the 2023 FMP Review, state compliance reports, and New Jersey and Delaware *de minimis* requests for Red Drum.
- Consider approval of the 2023 FMP Review, state compliance reports, and New Jersey, Delaware, South Carolina, and Georgia *de minimis* requests for Atlantic Croaker.

6. Progress Update on Red Drum, Atlantic Croaker, and Spot Benchmark Stock Assessments (12:25-12:30 p.m.)

Background

- Work on the red drum benchmark stock assessment was initiated in late 2022/early 2023. In-person Assessment Workshops were held November 6-9, 2023 and March 11-14, 2024. The SouthEast Data and Assessment Review (SEDAR) Review Workshop will be held August 13-16, 2024 in Charleston, SC. The assessment and peer review report are expected to be presented to the Board at their October 2024 meeting.
- Work on the Atlantic croaker and spot benchmark stock assessments was initiated in early 2023. At their October 2023 meeting, the Policy Board agreed to decouple the spot and Atlantic croaker stock assessments due to the loss of a lead modeler, and move forward with the Atlantic croaker stock assessment to be completed first. Work on the spot stock assessment will resume once the Atlantic croaker assessment is completed and peer-reviewed. A sub-group of the Stock Assessment Subcommittee is meeting biweekly to discuss Atlantic croaker modeling progress.

Presentations

- Stock assessment update by J. Kipp.

7. Other Business/Adjourn

Sciaenids Management Board

Activity level: High

Committee Overlap Score: Moderate (American Eel TC, Cobia TC, Horseshoe Crab TC, Weakfish TC)

Committee Task List

- Red Drum SAS – Conduct Red Drum Benchmark Assessment
- Atlantic Croaker and Spot SAS – Conduct Atlantic Croaker and Spot Benchmark Assessments
- Black Drum TC – Update annual indicators
- Red Drum TC – Assist with the Red Drum Benchmark Assessment
- Atlantic Croaker TC – Gather data and assist with Atlantic Croaker Benchmark Assessment; Conduct Traffic Light Analysis
- Spot TC – Gather data and assist with Spot Benchmark Assessment; Conduct Traffic Light Analysis
- Atlantic Croaker TC/PRT – July 1: Compliance Reports Due
- Red Drum TC/PRT – July 1: Compliance Reports Due
- Black Drum TC/PRT – August 1: Compliance Reports Due
- Spotted Seatrout PRT – September 1: Compliance Reports Due
- Spot TC/PRT – November 1: Compliance Reports Due

TC Members:

Atlantic Croaker: Kristen Anstead (ASMFC), Tracey Bauer (ASMFC), Stacy VanMorter (NJ), Devon Scott (DE), Harry Rickabaugh (MD), Ingrid Braun (PRFC), Willow Patten (NC), Margaret Finch (SC), Dawn Franco (GA), Halie OFarrell (FL)

Black Drum: Harry Rickabaugh (MD, Chair), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Jennifer Pyle (NJ), Jordan Zimmerman (DE), Ethan Simpson (VA), Chris Stewart (NC), Chris McDonough (SC), Ryan Harrell (GA), Rebecca Scott (FL)

Red Drum: Ethan Simpson (VA, Chair), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Alissa Wilson (NJ), Matthew Jargowsky (MD), Cara Kowalchyk (NC, Vice-Chair), Joey Ballenger (SC), Chris Kalinowsky (GA), Sarah Burnsed (FL)

Spot**:** Harry Rickabaugh (MD, Chair), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Stacy VanMorter (NJ), Devon Scott (DE), Ingrid Braun (PRFC), Willow Patten (NC), Michelle Willis (SC), Britney Hall (GA), Halie OFarrell (FL)

Plan Review Team Members:

Atlantic Croaker: Harry Rickabaugh (MD), Ingrid Braun (PRFC), Ethan Simpson (VA), Willow Patten (NC), Chris McDonough (SC), Tracey Bauer (ASMFC)

Black Drum: Jordan Zimmerman (DE), Chris Stewart (NC), Chris McDonough (SC), Tracey Bauer (ASMFC)

Red Drum: Matthew Jargowsky (MD), Ethan Simpson (VA), Cara Kowalchyk (NC), Joey Ballenger (SC), Matt Kenworthy (FL), Tracey Bauer (ASMFC)

Spot**:** Harry Rickabaugh (MD), Ethan Simpson (VA), Chris McDonough (SC), Dawn Franco (GA), Tracey Bauer (ASMFC)

Spotted Seatrout**:** Tracey Bauer (ASMFC), Samantha MacQuesten (NJ), Lucas Pensinger (NC), Brad Floyd (SC), Chris Kalinowsky (GA)

SAS Members:

Red Drum: Joey Ballenger (SC, Chair), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Angela Giuliano (MD), CJ Schlick (SC), Jared Flowers (GA), Chris Swanson (FL), Ethan Simpson (VA)

Atlantic Croaker and Spot: Kristen Anstead (ASMFC), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Harry Rickabaugh (MD), Brooke Lowman (VA), Trey Mace (MD), Margaret Finch (SC)

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

SCIAENIDS MANAGEMENT BOARD

The Westin Crystal City
Alington, Virginia
Hybrid Meeting

April 30, 2024

These minutes are draft and subject to approval by the Sciaenids Management Board.
The Board will review the minutes during its next meeting.

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ATTENDANCE

Board Members

Joe Cimino, NJ (AA)
Jeff Kaelin, NJ (GA)
John Clark, DE (AA)
Roy Miller, DE (GA)
Craig Pugh, DE, proxy for Rep. Carson (LA)
Carrie Kennedy, MD, proxy for L. Fegley (AA)
Shanna Madsen, VA, proxy for J. Green (AA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Chad Thomas, NC, proxy for Rep. Wray (LA)
Chris McDonough, SC, proxy for M. Rhodes (GA)
Ben Dyar, SC, proxy for Sen. Cromer (LA)
Doug Haymans, GA (AA)
Spud Woodward, GA (GA)
Jeffery Ranchen, FL, proxy for J. McCawley (AA)
Gary Jennings, FL (GA)
Rep. Thad Altman, FL (LA)
Ron Owens, PRFC

(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)

Ex-Officio Members

Somers Smott, Chair, Atl. Croaker Technical Committee
Harry Rickabaugh, Chair, Black Drum & Spot Technical Committees
Matthew Rogers, Law Enforcement Representative

Staff

Robert Beal
Toni Kerns
Tina Berger
Madeline Musante
Tracey Bauer
Caitlin Starks
James Boyle
Emile Franke
Chelsea Tuohy
Katie Drew
Jeff Kipp
Kristen Anstead
Lindsey Aubert
Trevor Scheffel

Guests

Pat Augustine
Linda Barry, NJ DEP
Mel Bell
Michael Bowen, Cornell Uni.
Delayne Brown, NH FGD
Debbie Campbell
John Carmichael, SAMFC
Nicole Caudell, MD DNR
Haley Clinton, NC DEQ
Scott Curatolo-Wagemann, Cornell Cooperative Extension of Suffolk County
Tanya Darden, SC DNR MRRI
Conor Davis, NJ DEP
Jacob Dorothy, MA DMF
Roman Dudus
Jacob Espittia, FL FWC
Julie Evans, East Hampton Town Fisheries Advisory Cmte.
James Fletcher, Unites National Fisherman's Assn.
Anthony Friedrich, ASGA
Erica Fuller
Keilin Gamboa-Salazar, SC DNR
Marty Gary, NY (AA)
Matthew Gates
Pat Geer, VMRC
Lewis Gillingham, VMRC
Angela Giuliano, MD DNR
Derrek Hughes, NYS DEC
Kris Kuhn
Robert LaCava, MD DNR
Brooke Lowman, VMRC
Michael Luisi, MD DNR
John Maniscalco, NYS DEC
Anthony Mastitski, Marine Stewardship Council
Patrice McCarron, Maine Lobstermen's Assn.
Genine McClair, FL FWC
Jack McGovern, NOAA
Meredith Mendelson, MA DMR
Chris Moore, Chesapeake Bay Foundation
Robert Murphy, NOAA
Thomas Newman, North Carolina Fisheries Assn.
Jeff Nichols, MA DMR

Guests (continued)

Scott Olszewski, RI DEM
Alexis Park, MD DNR
Will Poston, ASGA
Jill Ramsey, VMRC
David Sikorski
Renee St. Amand, CT DEEP
Kristen Thiebault, MA DMF
Laura Tomlinson, MA DMF
Craig Weedon, MD DNR
Angel Willey, MD DNR
Travis Williams, NC DEQ
Gregory Wojcik, CT DEEP
Chris Wright, NOAA
Daniel Zapf, NC DEQ

The Sciaenids Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia, a hybrid meeting, in-person and webinar; Tuesday, April 30, 2024, and was called to order at 11:45 a.m. by Chair Doug Haymans.

CALL TO ORDER

CHAIR DOUG HAYMANS: Good morning, everyone, I've got 11:45, and in the interest of lunch, we'll get started with the Sciaenids Management Board. If I could ask the folks on this side, my right, to turn your name tags this way, because there are two in the middle that I don't know. Perfect, thank you. That would be very helpful, appreciate it.

Welcome to the new era of Doug Hayman's Chairmanship, hopefully it will survive two years, and it all will be good.

APPROVAL OF AGENDA

CHAIR HAYMANS: First of all, we have an agenda in front of you. We have one item to add to Other Business, which will be a very brief discussion on the Traffic Light Approach for Spot, and Tracey will handle that. Are there any other additions to the agenda? Seeing none; we'll approve the agenda.

APPROVAL OF PROCEEDINGS

CHAIR HAYMANS: We have the proceedings from October in front of you. Are there any corrections or additions to that? Seeing none; we'll approve the proceedings.

PUBLIC COMMENT

CHAIR HAYMANS: Next is an opportunity for Public Comment for items that are not listed on the agenda.

Is there anyone in the audience who wish to provide public comment? Seeing none; Tracey, is there any online? There are no online comments, I love it as we move along quickly.

CONSIDER SPOT FISHERY MANAGEMENT PLAN REVIEW AND STATE COMPLIANCE REPORTS FOR THE 2022 FISHING YEAR

CHAIR HAYMANS: From here on out we'll turn it over to Tracey, to talk about the Spot Fishery Management Plan Review and State Compliance Reports.

MS. TRACEY BAUER: Good morning, everyone, I will be covering the Spot Fishery Management Plan Review. As an overview, I will be presenting an abbreviated overview of the Spot FMP today. In this presentation I will start with a brief update of the status of the fishery for Spot, and then we'll go over the de minimis requests received and the most recent compliance reports. Then lastly, review the Plan Review Team's recommendations in the FMP Review.

We will first start off with reviewing the recent trends in total landing of spot. This figure shows commercial and recreational landings in millions of pounds through 2022. The total landings of spot in 2022 were estimated to be 3.9 million pounds, which is a decrease of 45 percent from 2021, and below the 10-year average of 8.3 million pounds.

However, it should be noted that the recreational and commercial regulations for spot implemented in 2021 and 2022 may be a contributing factor for the declines observed in both sectors in 2022. Of the 3.9 million pounds of total landings of Spot harvest in 2022, 1.5 million pounds of that were harvest commercially, and Virginia landed approximately 55 percent of the spot commercial harvest, followed by North Carolina with 26 percent. I also wanted to briefly touch on the recent trends in the recreational fishery specifically. This figure shows recreational harvest in releases in millions of fish, as well as percent of recreational fish that were released.

The recreational harvest has fluctuated wildly throughout the time series, but has generally declined from the most recent peak in 2014, with a near time series low harvest occurring in 2022 at 12.8 million fish. Anglers in Virginia harvested 70

percent of the coastwide number of fish in 2022, followed by anglers in Maryland at 13 percent.

Releases have been increasing annually since the low in 2018. The number of fish released recreationally in 2022 was estimated to be 16.1 million fish a 1.1 million fish increase from 2021, and the percent of fish caught recreationally that were released, which is on the orange line in the graph, released recreationally have generally been increasing throughout the time series, with a time series high in 2022 at 56 percent of the fish caught recreationally that are released.

We will now cover the de minimis requests and the PRT recommendations section of the presentation. As a reminder, as stated in the Omnibus Amendment the spot is managed under, a state qualifies for de minimis status if its past three years average of the combined commercial and recreational catch is less than 1 percent of the past three years average of the coastwide combined catch.

Therefore, spot does not have a separate de minimis for the commercial and recreational fisheries like Atlantic croaker. New Jersey, Georgia and Delaware all requested de minimis for spot. New Jersey and Georgia's three-year average combined recreational and commercial harvest is less than 1 percent of the coastwide total. Delaware, however, did not meet the requirement of less than 1 percent at 1.05 percent, which we will discuss further in a bit.

The PRT recommendations, they found no inconsistencies among states with regards to the requirements of the Omnibus Amendment in Addendum III. As in previous years, the PRT recommends that the Board consider changing the de minimis process and criteria for spot, to put in place separate commercial and recreational de minimis measures similar to Atlantic croaker.

But this would be following the next assessment or when a new management document is initiated, whatever comes first. It would also follow the procedures in the recently approved de minimis policy. A change here would not only mirror Atlantic croaker de minimis structure, but would provide the states more flexibility in managing their commercial and recreational fisheries. Additional research and monitoring recommendations can be found in the FMP review document.

As for Delaware's de minimis request, the PRT did not recommend de minimis status for Delaware. In the previous FMP review, the Plan Review Team had stated that if Delaware was over the de minimis threshold for a third year in a row, which they were this year, they would not recommend de minimis again, as it showed a consistent trend. In the past three years, Delaware has ranged between 1.05 and 1.2 percent of the coastwide harvest of spot. In addition, the PRT noted that Delaware's recreational spot harvest estimate from MRIP in 2023 is over 11 times higher than 2022, so they would likely not qualify for de minimis again in this year's FMP Review. As a reminder, on the screen are the aspects of Delaware's regs that would have to change if Delaware was not granted de minimis again today.

Right now, Delaware has no restrictions specifically on spot recreational or commercial harvest. The non de minimis states are required to implement at this time a 50 fish recreational bag limit and commercial regulations that would have reduced the average 10-year commercial harvest by 1 percent. The action for the Board today is a motion on approval or disapproval of FMP review, state compliance reports and de minimis requests for spot. With that I can take any questions.

CHAIR HAYMANS: Any questions? My thought was to remove Delaware from a motion. Let's get past the FMP review, the state compliance reports and the two easy de minimis, and then let's pass those and then let's have a discussion about what to do with Delaware. If that's okay, I would entertain a motion. Spud.

MR. A. G. "SPUD" WOODWARD: **Move to approve the spot FMP review for the 2022 fishing year, state compliance reports and de minimis status for New Jersey and Georgia**.

CHAIR HAYMANS: Joe Cimino, thank you. Any additional discussion? **Any opposition? Seeing none; thank you**. John, let's talk about Delaware.

MR. CLARK: I will try to make a convincing argument here for Delaware to continue its de minimis status. As reported, we were at 1.05 percent of our total landings. We're still just barely over the de minimis threshold. Our recreational harvest has been below the 1 percent of the coastwide harvest since 2016.

Our exceedance of the 1 percent combined recreational and commercial harvest is due to Delaware's commercial harvest exceeding 1 percent of the coastwide harvest for a majority of the past 10 years, but when you combine the two, I think the reason that we are now over 1 percent more is just because with both commercial and recreational declining, the commercial harvest has become more of a factor when you combine the two.

When you look at that, the interesting thing is that we're still much more similar to the de minimis states than our actual landings, both commercially and recreational than we are to the non de minimis states. I would just think that it would make more sense to keep us in that category, 2023 as pointed out, the initial MRIP estimates show that Delaware had a huge recreational harvest, but it could be an MRIP anomaly, our PSE for 2023 is about 41 percent. There also, you can take that with a bit of a grain of salt.

Then finally, I would just say that on the process side of things with de minimis, we asked, as the report shows, there was talk about splitting the commercial and recreational de minimis criteria. It's also part of the de minimis policy that isn't clear is, in a situation like ours, where we have now broken the de minimis threshold, just barely for three years in a row. If we make these changes and then going forward, we're back below de minimis again, there is really not a clear process for returning to de minimis, you know to remove the regulations that were put in place when we went through this brief period of being above de minimis. For all those reasons I would ask the Board to indulge us and allow us to continue in de minimis for another year. Thank you.

CHAIR HAYMANS: Spud.

MR. WOODWARD: Yes, question, John. Not being familiar with the way that the recreational fishery is prosecuted in Delaware, but I assume that there is a fair amount of shore mode catches of spot in Delaware.

MR. CLARK: That is true Spud. One of the main places that people catch a lot of Spot, is down at our major fishing pier, the Cape Henlopen, right down at the mouth of the Bay.

CHAIR HAYMANS: Spud, is there a follow up?

MR. WOODWARD: Yes, I think obviously with the concerns we've had with the FES study and the pilot study and shore mode being in one of those ones that might be more proportionately affected. I certainly think that adds some context to this. I appreciate it, John.

CHAIR HAYMANS: Chris.

MR. CHRIS BATSAVAGE: John, you mentioned there could be an anomaly in the MRIP estimates. It's two questions, one, did your staff kind of take a deep dive into the MRIP data to see if there are any intercepts that might have been anomalous? Second question is, anecdotally, did it appear that there were higher spot catches in Delaware last year by the recreational fishery?

MR. CLARK: Well, in terms, we haven't done the real deep look at the data yet. Anecdotally, I know just going by the reports that it did sound like it was a good year for recreational spot fishing. Roy, I know you fish a lot of times down in that area. Did you see a lot of Spot?

MR. ROY W. MILLER: Yes, particularly inshore areas spot has been abundant the past couple years, and there is a pretty active sport fishery, at least I'm categorizing the sport fishery for Spot.

CHAIR HAYMANS: Okay, have a little discussion. Is there any desire for a motion to support Delaware? Spud.

MR. WOODWARD: Yes, I'll **move that given the circumstances surrounding this, that Delaware be granted de minimis status per its request**.

CHAIR HAYMANS: Second. John Clark. Any additional discussion? Chris.

MR. BATSAVAGE: I appreciate kind of the administrative burden and the variable landings that Delaware has seen. But I cannot support this, you know this could have been a one-off estimate of spot harvest, but it could also mean that there is more available to Delaware last year, and it could be more with warmer winters and things like that. Kind of when you consider that the spot population at least according to the landings in independent surveys show that they are at a very low level, compared to what we were used to seeing for decades and decades. I don't see the harm in Delaware basically putting in the same recreational and commercial limits that the other non de minimis states do, just as a safeguard measure.

CHAIR HAYMANS: Anyone else? Okay, all those in favor of the motion.

MS. TONI KERNS: Mr. Chair, I don't think we actually read this motion explicitly in the record. Do you mind reading it for us?

CHAIR HAYMANS: The motion is, **move to approve de minimis status for Delaware**. Motion by Mr. Woodward, second by Mr. Clark. **Again, all those in favor. I see 8 in favor, all those opposed, I see 1. Motion carries**. Thank you for good discussion, thank you for moving through that quickly, and hopefully as we get to a new plan amendment, we can begin to discuss separating commercial and recreational, as it probably should be.

PROGRESS UPDATE ON RED DRUM, ATLANTIC CROAKER, AND SPOT BENCHMARK STOCK ASSESSMENTS

CHAIR HAYMANS: Next, we'll have a Progress Report from Jeff Kipp about Red Drum, Croaker, and Spot Benchmark Assessment.

MR. JEFF J. KIPP: I'll go ahead and jump right in to updates on a couple sciaenid species, starting off with red drum. The red drum assessment, we have had three workshops to date for this assessment. We had a data workshop over three days back in last year, June of last year, that was a virtual workshop. We had an assessment workshop in person in Charleston in November of last year. One note from that, we did make an additional data request for eight additional months of data, covering January through August of 2023, and this stems from the Technical Committee's decision to change the year definition in the assessment model from a calendar year of January through December to a fishing year of September through August.

With that change we were short on a 2022 terminal year for data. We did get most data for that additional period, but the TC did decide that the 2022 fishing year should not be used for status determination, due to some preliminary data and some incomplete data. We do have complete and final data for the 2021 fishing year, and so that was chosen as the terminal year for the assessment.

We also had a second assessment workshop just recently last month, also in Charleston, in person, that was March 11 through the 14th. There we did review and consider a number of analyses, including some stock synthesis models, the traffic light analyses that were initially developed during the simulation assessment, and some index-based methods.

The SAS does have one final meeting that is going to be a virtual meeting on May 16th, to finalize our stock status determinations, and research recommendations. I do just want to note that there is a potential for advice from different analyses by stock coming from this assessment. Looking forward, our remaining items for the timeline for the red drum assessment.

The SAS will be finalizing the assessment report in early June. That assessment report will be reviewed by the Technical Committee in late June. We'll then send off the report once it's been approved by the Technical Committee to SEDAR for the SEDAR Peer

Review Panel by the first of July, and we are scheduling the SEDAR Peer Review Workshop for the week of August 12, down in Charleston, South Carolina. We'll be presenting that assessment and peer review to this Board at the annual meeting in October of this year.

Moving over to the Atlantic croaker and Spot assessments. These were originally packaged together to go through an assessment together. We had a data workshop; it was a virtual workshop in May of last year. We also had a methods workshop that was virtual as well, back in September. During that timeframe we did run into some personnel challenges.

The lead analyst for the Atlantic croaker assessment changed positions and can no longer serve in that role, so the Spot lead analyst transitioned to that vacant role to take over. This created some challenges with workload. We did come to this Board at our annual meeting last year and proposed decoupling the Atlantic croaker and Spot assessments, to focus on the Atlantic croaker assessment first, and then jump into the Spot assessment once the Atlantic croaker assessment is completed. That was approved by the Board at the annual meeting.

For the Atlantic croaker assessment, we have been having biweekly modeler calls to develop the stock synthesis model for Atlantic croaker. The following items here for the timeline are in gray, and italics, and that is because these dates are likely to change. Our plan for the assessment workshop, which will be our last workshop for this assessment, is to hold off on planning that, until we feel like we've seen enough progress and development in the stock-synthesis model during these biweekly modeler calls, to have a productive assessment workshop.

Right now, it is looking like at least another month or two before we start planning for that final assessment workshop as a part of the Atlantic croaker assessment. The Peer Review Workshop was tentatively scheduled for July/August of this year, but that is likely to be postponed to a later month. Then we were tentatively scheduled to present the Atlantic croaker assessment and peer review to this Board at the annual meeting of this year, but that is likely to be postponed as well.

Right now, we're thinking probably one meeting cycle, so possibly the winter meeting of 2025. Then the plan is, once that Atlantic croaker assessment is finalized and peer reviewed and presented to the Board, the Stock Assessment Subcommittee will then pick up with the Spot assessment, and the plan is to finish that assessment one year from when it is started after the Atlantic croaker assessment. That is it for my updates on those stock assessments, and I can take any questions.

CHAIR HAYMANS: Looks like we're going to need more time on the annual meeting agenda. Any questions for Jeff? Excellent, seeing none; thank you, Jeff, thank you very much. I'm going to skip past the Item 6, move down to Other Business to talk about TLA, and then we'll come back to the final agenda item. Tracey.

MS. BAUER: We just wanted to touch base with the Board and get some direction about the traffic light analyses this year for both Spot and Croaker, and just get some confirmation whether to conduct both for the two species. It's been a while since we've conducted the compete traffic light analyses for both species, and I think we do have the ChesMMAP data now. Again, we just wanted to touch base with the Board and find out from you all whether or not we should start getting the data together, because that will take a bit to conduct these analyses this year. Thank you.

CHAIR HAYMANS: Any advice, direction? Shanna.

MS. SHANNA MADSEN: I do think that it is important at this point for us to start looking at the TLAs again. I know that we kind of put that on hold while we were going through the stock assessments, but I also know that SS3 is giving you some trouble on croaker. I would like to see the TLAs. One thing that I would recommend is shortening that document quite a bit.

I don't want to put too much burden on staff, considering that they're all so in the midst of stock

assessments for these species. I think that the actual indices, the composite indices that we use to make management decisions are sufficient. There is a lot of other stuff in that document that is like great as an addendum to it, but I really don't think that it is necessary for making management decisions. Just trying to lighten the load a little bit there.

CHAIR HAYMANS: Anyone else? Do you need anything else, Tracey? I'm sorry, yes, Carrie.

MS. CARRIE SELBERG: I agree with Shanna. I think whatever we can do to lighten the load, I fully support that. But I also think it's really important, given that Spot, their life span is only three years, and we haven't seen them in a while. We've seen a stock wide assessment in a while, so I think it would be really good to take a look at those this fall.

CHAIR HAYMANS: Anyone else? Okay, we're good on that.

ELECT VICE-CHAIR

CHAIR HAYMANS: That gets us to our last agenda item, and that is the election of a Vice-Chair. Oh, look, John Clark.

MR. CLARK: It is my pleasure to **nominate our esteemed colleague from the Commonwealth of Virginia, Ms. Shana Madsen**.

CHAIR HAYMANS: Excellent, is there a second? Chris Batsavage. Any discussion? Do we need to talk about cobia before we make this vote? No, okay. **Is there any opposition? Seeing none; congratulations**, thank you for your willingness volunteering and all that good stuff.

ADJOURNMENT

CHAIR HAYMANS: I think that concludes the business of this Committee, thank you.

(Whereupon the meeting adjourned at 12:10 p.m. on Tuesday, April 30, 2024.)

Atlantic States Marine Fisheries Commission

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

MEMORANDUM

TO: **Sciaenids Management Board**

FROM: **Tracey Bauer, FMP Coordinator**

DATE: **July 22, 2024**

SUBJECT: **Discussion of the 2023 Fishing Year Traffic Light Analysis of Spot and Atlantic Croaker**

Technical Committee Members in Attendance: Somers Smott (Atlantic Croaker Chair, VA), Harry Rickabaugh (Spot Chair, MD), Dawn Franco (GA), Stacy VanMorter (NJ), Ingrid Braun-Ricks (PRFC), Willow Patton (NC), Halie O'Farrell (FL), Margaret Finch (SC), Devon Scott (DE)

Staff in Attendance: Tracey Bauer, Jeff Kipp, Kristen Anstead

Others in Attendance: Ethan Simpson (VA), Chris Batsavage (NC), Brooke Lowman (VA), CJ Schlick (SC), Danny Bryant (GA), Chris McDonough (SC)

This memorandum serves as a summary of the joint Spot and Atlantic Croaker Technical Committees (TCs) call on June 27, 2024. The following outlines the TCs' discussions and recommendations for the Board regarding the Traffic Light Analysis (TLA) for both species.

Background

Annually, the TC conducts a TLA to evaluate a Mid-Atlantic (NJ-VA) and South Atlantic (NC-FL) harvest metric, combining commercial and recreational landings in each region. The TC also evaluates a Mid-Atlantic and South Atlantic abundance metric, combining indices of abundance from fishery-independent surveys in each region. Metrics are evaluated using a color proportion of green, yellow, or red based on comparing that year to a 2002-2012 reference period. Addendum III for each species defined 30% red as a moderate concern and 60% red as a significant concern to the fishery. Management action is triggered according to the 30% red and 60% red thresholds if both the adult abundance and harvest thresholds from a region are exceeded in a set number of terminal years.

The TLA for the 2019 fishing year indicated that both species triggered at the 30% red threshold. State implementation plans for management measures were approved in early 2021 and all new management measures were enacted by the end of 2021. These management measures were to remain in place for at least two years for spot and three years for Atlantic croaker to promote consistent measures and allow for sufficient time to evaluate population response, as per Addendum III. Addendum III for both species also stipulates that while

triggered measures are in effect, only the abundance metrics can be used to evaluate the stock in future updates to the TLA.

In April 2024, the Sciaenids Management Board directed the Spot and Atlantic Croaker TCs to conduct abbreviated TLAs with data through 2023 for both species, focusing on updating only the harvest and abundance composite metrics used to make management decisions, and not the supplemental information which has been provided in the past.

Results of the 2023 FY TLA Update and Recommendations

Spot

Abundance metrics for spot for both regions did not trigger at either threshold in the current update to the TLA. Addendum III states for spot that after two years, if abundance metrics do not exceed either threshold, triggered measures are no longer required and the TC can resume using the harvest metrics to trigger management action.

Although triggered measures are no longer required because abundance characteristics in the spot TLA did not trigger at either threshold, the Spot TC recommends maintaining the current management measures. The TC recognized that if they were to resume using the harvest metrics next year, the TLA could potentially immediately trigger again, requiring the same management action. In addition, there is continued concern with the low spot commercial and recreational harvest, so the TC does not recommend lifting the harvest restrictions at this time.

Atlantic Croaker

For Atlantic croaker, the abundance metric for the Mid-Atlantic region exceeded the 30% threshold in all four terminal years. Addendum III states, in this case, if triggered measures have remained in place for at least four years due to either region's abundance metric exceeding the threshold, the TC must evaluate trends in the stock's abundance to recommend to the Board whether triggered measures should remain in place or more restrictive measures should be considered.

The Atlantic Croaker TC recommends maintaining the current management measures. The TC did not want to recommend more restrictive measures while the Atlantic croaker benchmark stock assessment is currently ongoing and will be completed approximately within the next year.

For more information, please contact Tracey Bauer, Fishery Management Plan Coordinator, at 703.842.0723 or tbauer@asmfc.org.

DRAFT DOCUMENT FOR BOARD REVIEW

ATLANTIC STATES MARINE FISHERIES COMMISSION

2024 TRAFFIC LIGHT ANALYSIS REPORT FOR SPOT (*Leiostomus xanthurus)*

2023 Fishing Year

Prepared by the Technical Committee
Drafted July 2024

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

DRAFT DOCUMENT FOR BOARD REVIEW

EXECUTIVE SUMMARY

Background

The purpose of this report is to evaluate the current status of spot using the annual Traffic Light Analysis (TLA). Annually, the Technical Committee (TC) conducts a TLA to evaluate a Mid-Atlantic and a South Atlantic harvest metric, combining commercial and recreational landings in the region. The TC also evaluates a Mid-Atlantic (NJ-VA) and South Atlantic (NC-FL) abundance metric, combining indices of abundance from surveys in the region. Each metric is evaluated using a color proportion of green, yellow, or red calculated for each year based on comparing the respective year to a 2002-2012 reference period. Addendum III defined two thresholds, 30% (proportion=0.30) red as a threshold for moderate concern and 60% (proportion=0.60) red as a threshold for significant concern to the fishery. Management action is triggered according to the 30% red and 60% red thresholds if both the adult abundance and harvest thresholds are exceeded in any two of the three terminal years in either region.

2023 Harvest Metrics

The Mid-Atlantic harvest metric did exceed the red threshold at 30% in two of the three terminal years. The South Atlantic harvest metric exceeded the red threshold at 30% in all three terminal years. The harvest metrics in 2023 cannot be used as a trigger mechanism since they represent years with catch restrictions in place.

2023 Abundance Metrics

The abundance metric did not trigger in two of the three terminal years for both the Mid- and South Atlantic.

Conclusions

Harvest exceeded the 30% threshold in the South Atlantic in all three years and two out of the three terminal years in the Mid-Atlantic. Harvest restrictions put in place in 2021 were still in effect and so the harvest metric cannot be used as a trigger mechanism in 2023. The abundance composite metrics did not trigger in either the Mid-Atlantic or South Atlantic. The TC recommends maintaining current management measures.

DRAFT DOCUMENT FOR BOARD REVIEW

1 INTRODUCTION

Spot is managed under the Omnibus Amendment for Spot, Spotted Seatrout, and Spanish Mackerel (2011), Addendum II (2014), and Addendum III (2020). Addendum III describes the Traffic Light Analysis (TLA) using a regional approach and establishes management actions to be taken if the TLA triggers were tripped. Regions are the South Atlantic (FL-NC) and the Mid-Atlantic (VA-NJ).

The TLA is a way to incorporate multiple data sources (both fishery-independent and -dependent) into a single, easily understood metric for management advice. It is often used for data-limited species, or species that are not assessed on a frequent basis. The name comes from assigning a color (red, yellow, or green) to categorize relative levels of indicators on the condition of the fish population (abundance metric) or fishery (harvest metric).

The TLA uses the following data sources in spot management:

- Harvest Metric: recreational and commercial landings by region
- Abundance Metric: Age 1+ abundance indices by region
    - Mid-Atlantic: Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) and the Northeast Fishery Science Center (NEFSC) Multispecies Bottom Trawl Survey
    - South Atlantic: Southeast Area Monitoring and Assessment Program (SEAMAP) and the North Carolina Division of Marine Fisheries (NCDMF) Pamlico Sound Survey (Program 195)

Management action will be triggered according to the current 30% red (moderate concern) and 60% red (significant concern) thresholds if both the abundance and harvest thresholds are exceeded in either region in any two of the three terminal years. The thresholds are defined as the long-term mean of the reference period (2002-2012).

In 2020, the TLA for spot had red proportions that exceeded the 30% threshold for the period of 2017-2019 in harvest composite characteristics for both regions. Exceeding the 30% threshold represents moderate concern to the fishery and initiated a moderate management response. All non-*de minimis* states were required to institute more restrictive measures in their recreational and commercial fisheries. Management measures were initiated in 2021 and are required to remain in place for two years, through 2022. However, the TLA for fishing years 2021 and 2022 resulted in an unknown status due to data issues (e.g., missing years of data due to COVID, vessel changes in ChesMMAP) and uncertainty in how to interpret harvest metrics when management restrictions have been put in place.

Additionally, the TLA was not run at all in 2023 due to data being unavailable and to allow the Atlantic Croaker and Spot Technical Committees to focus on assisting with the Atlantic croaker benchmark stock assessment. A benchmark stock assessment was expected in 2024 for Atlantic croaker, with a benchmark stock assessment for spot to follow once Atlantic croaker's is complete. However, as of July 2024, the Atlantic croaker benchmark is still in development and is unlikely to be completed on time. Therefore, the Sciaenid Board requested the TLA be run for

the August 2024 meeting. The Board requested the TLA focus only on the time series used in management, not the supplemental information provided in previous TLA reports.

2 TRAFFIC LIGHT ANALYSIS RESULTS

2.1 Harvest Composite Characteristic Index (Figure 1 and Figure 2)

- Harvest restrictions were put in place in 2021 in response to the 2020 TLA triggering at the 30% threshold. These restrictions are still in place and thus the harvest metrics cannot be interpreted for the purpose of a TLA, since lower landings get a red designation but measures have been put in place to lower landings.
- Landings in both regions remain low relative to the reference period (2002-2012). It is unknown if this is due to the harvest restrictions or a continued concern for this fishery.
- The Mid-Atlantic harvest exceeds 30% red in two of the three terminal years. The South Atlantic harvest exceeds 30% red in all three terminal years.

2.2 Abundance Composite Characteristic Index (Figure 3 and Figure 4)

- In 2023, the Mid-Atlantic abundance index triggered at the 30% level, but it did not trigger in two of the three terminal years, so overall the abundance index did not trigger for this region.
- The South Atlantic abundance index did not trigger at 30% or 60% in any of the three terminal years.

3 SUMMARY

- Table 1 provides results of the past three years of TLA metrics for each region, as well as the current TLA status.
- Both harvest metrics triggered at the 30% threshold (moderate concern) but cannot be used for management because harvest restrictions have been in place since 2021.
- Neither abundance index triggered at any level.
- The TC recommends maintaining current management measures.

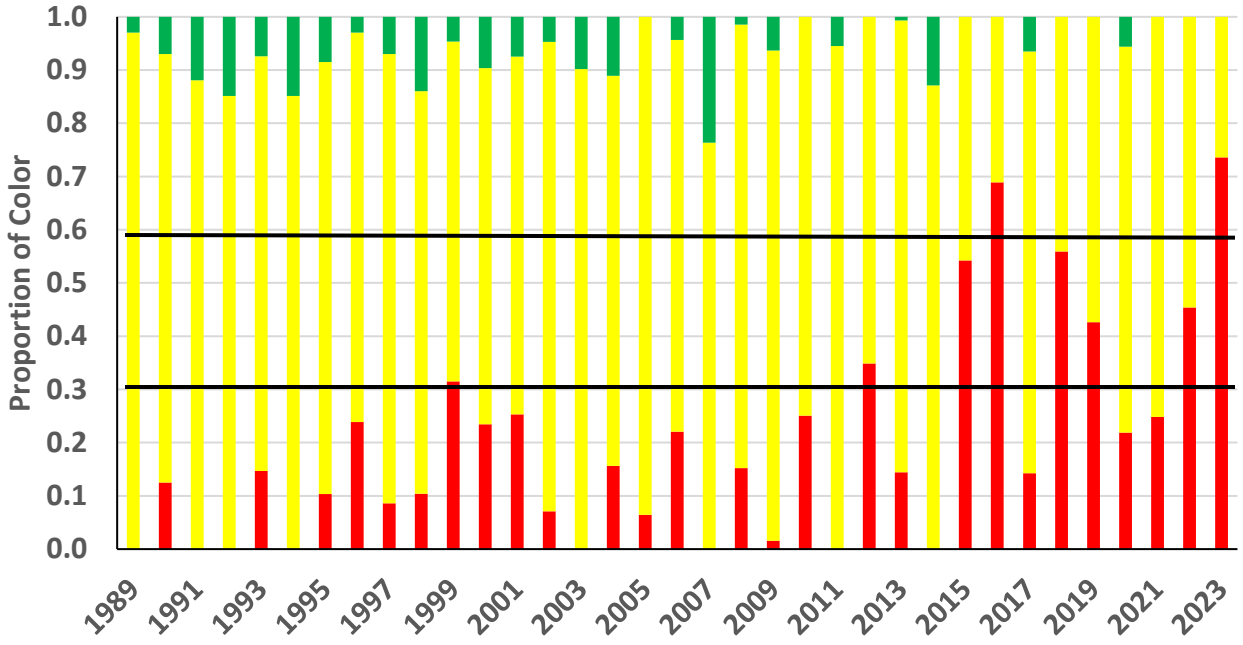


Figure 1. Annual TLA for spot harvest composite (commercial and recreational landings) in the Mid-Atlantic (NJ-VA) from 1989-2023 using a 2002-2012 reference period.

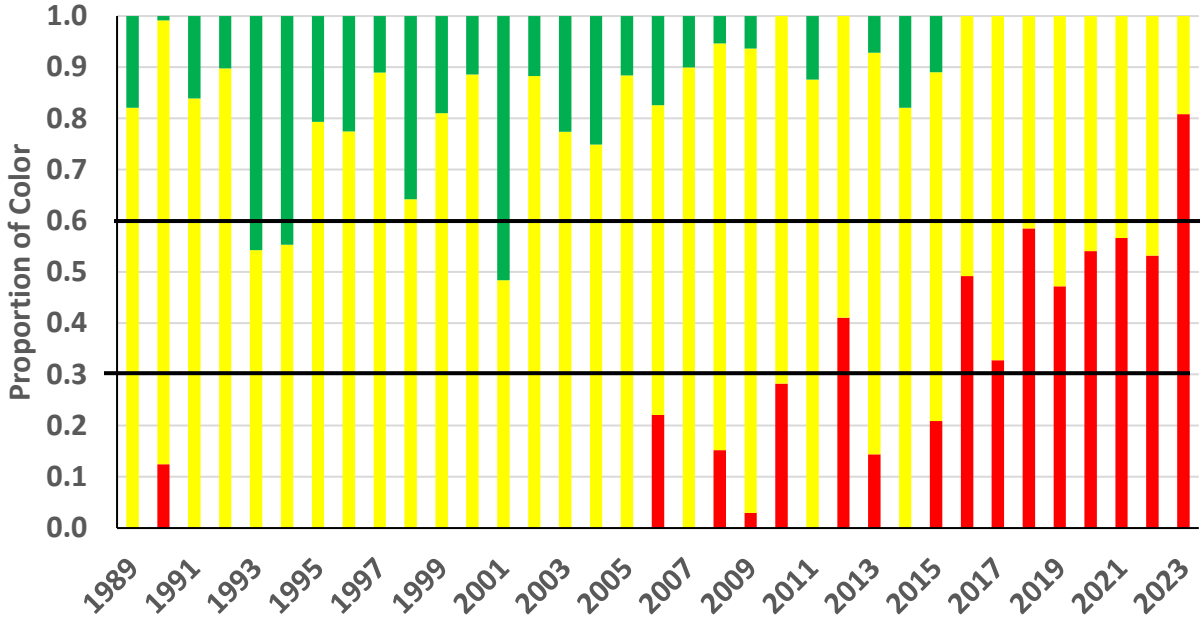


Figure 2. Annual TLA for spot harvest composite (commercial and recreational landings) in the South Atlantic (NC-FL) from 1989-2023 using a 2002-2012 reference period.

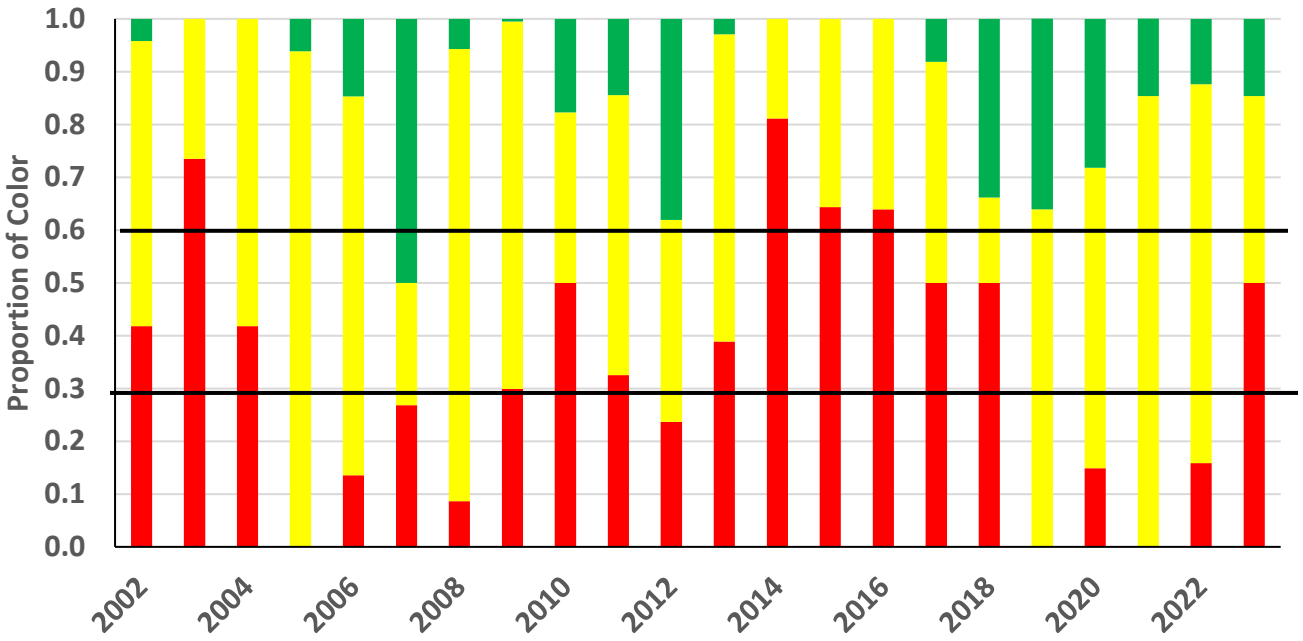


Figure 3. Annual TLA for adult (age 1+) spot composite abundance index in the Mid-Atlantic (NJ-VA; NEFSC and ChesMMAP) from 2002-2023 using a 2002-2012 reference period.

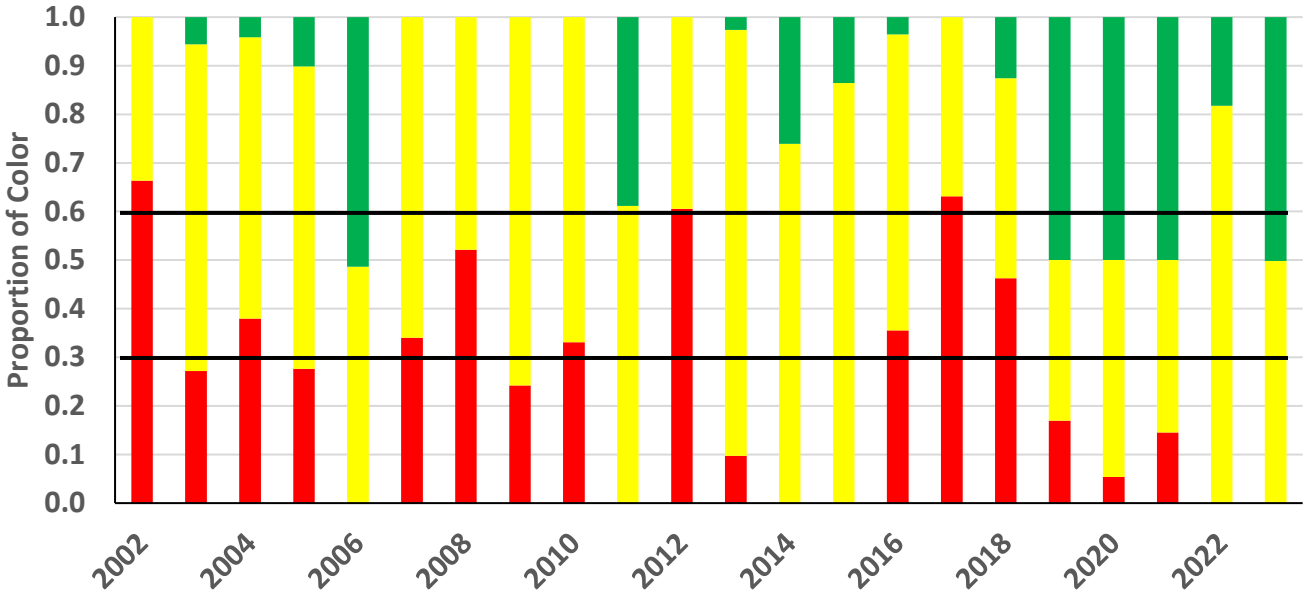


Figure 4. Annual TLA for adult (age 1+) spot composite abundance index in the South Atlantic (NC-FL; SEAMAP and NCDMF Program 195) from 2002-2023 using a 2002-2012 reference period.

Table 1. Traffic light analysis results for the Mid- and South Atlantic regions for 2021-2023. Management action is triggered according to the current 30% and 60% red thresholds if both the adult abundance and harvest metrics exceed these thresholds in any two of the three terminal years within either region.*

TLA Metric	Spot			2023 TLA Status
	2021	2022	2023	
Mid-Atlantic Harvest*	25% red	45% red	74% red (triggered at 30%)	Unknown*
South Atlantic Harvest*	57% red	53% red	81% red (triggered at 30%)	
Mid-Atlantic Adult Index	0% red	16% red	50% red (not triggered)	Not Triggered
South Atlantic Adult Index	15% red	0% red	0% red (not triggered)	

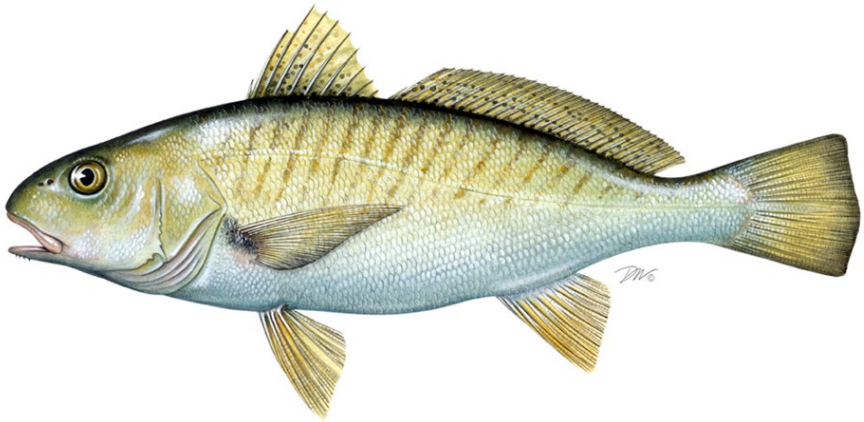
* Harvest metrics cannot be interpreted as a trigger mechanism in the TLA since catch restrictions to lower harvest have been in place since 2021. As long as catch restrictions are in place, trigger status relies solely on the abundance indices.

DRAFT DOCUMENT FOR BOARD REVIEW

ATLANTIC STATES MARINE FISHERIES COMMISSION

2024 TRAFFIC LIGHT ANALYSIS REPORT FOR ATLANTIC CROAKER (*Micropogonias undulatus)*

2023 Fishing Year



Prepared by the Technical Committee
Drafted July 2024

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

DRAFT DOCUMENT FOR BOARD REVIEW

EXECUTIVE SUMMARY

Background

The purpose of this report is to evaluate the current status of Atlantic croaker using the annual Traffic Light Analysis (TLA). Annually, the Technical Committee (TC) conducts a TLA to evaluate a Mid-Atlantic and a South Atlantic harvest metric, combining commercial and recreational landings in the region. The TC also evaluates a Mid-Atlantic (NJ-VA) and South Atlantic (NC-FL) abundance metric, combining indices of abundance from fishery-independent surveys in each region. Each metric is evaluated using a color proportion of green, yellow, or red calculated for each year based on comparing the respective year to a 2002-2012 reference period. Addendum III defined two thresholds, 30% (proportion=0.30) red as a threshold for moderate concern and 60% (proportion=0.60) red as a threshold for significant concern to the fishery. Management action is triggered according to the 30% red and 60% red thresholds if both the adult abundance and harvest thresholds are exceeded for either region in any three of the four terminal years.

2023 Harvest Metrics

The Mid-Atlantic harvest metric has exceeded the 60% red threshold in all four terminal years (2020-2023) and the South Atlantic harvest metric has exceeded the 30% red threshold in all four terminal years. This is the eighth consecutive year the harvest metric in both regions have exceeded the 30% threshold, although the harvest metrics in 2023 cannot be used as a trigger mechanism since they represent a year with catch restrictions in place.

2023 Abundance Metrics

The Mid-Atlantic metric exceeded the 30% threshold for all four of the terminal years and exceeded 60% in two of those years (2020 and 2023). The South Atlantic composite metric did not trigger in 2023 with none of the terminal years exceeding the 30% threshold.

Conclusions

The harvest metric triggered in both the Mid-Atlantic (60% threshold) and South Atlantic (30% threshold) from 2020 to 2023 indicating continued concern. Since harvest restrictions have been in place since 2021, the harvest metric cannot be used as a trigger mechanism in recent years. The abundance metrics triggered for the Mid-Atlantic at the 30% threshold and did not trigger in the South Atlantic. Addendum III states if triggered measures have remained in place for a minimum of four years due to proportions of red above a threshold for either of the composite regional abundance characteristics, the TC will, as part of conducting the annual TLA, evaluate trends in abundance to recommend to the Board whether triggered measures should remain in place or more restrictive measures should be considered. The TC recommends maintaining current management measures.

DRAFT DOCUMENT FOR BOARD REVIEW

1 INTRODUCTION

Atlantic croaker are managed under Amendment 1 to the Interstate Fishery Management Plan for Atlantic Croaker (2005) and Addendum I (2011), Addendum II (2014), and Addendum III (2020). Addendum III describes the Traffic Light Analysis (TLA) using a regional approach and establishes management actions to be taken if the TLA triggers were tripped. Regions are the South Atlantic (FL-NC) and the Mid-Atlantic (VA-NJ).

The TLA is a way to incorporate multiple data sources (both fishery-independent and -dependent) into a single, easily understood metric for management advice. It is often used for data-limited species, or species that are not assessed on a frequent basis. The name comes from assigning a color (red, yellow, or green) to categorize relative levels of indicators on the condition of the fish population (abundance metric) or fishery (harvest metric).

The TLA uses the following data sources in Atlantic croaker management:

- Harvest Metric: recreational and commercial landings by region
- Abundance Metric: Age 2+ abundance indices by region
    - Mid-Atlantic: Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) and the Northeast Fishery Science Center (NEFSC) Multispecies Bottom Trawl Survey
    - South Atlantic: Southeast Area Monitoring and Assessment Program (SEAMAP) and the South Carolina Department of Natural Resources (SCDNR) Trammel Net Survey

Management action will be triggered according to the current 30% red (moderate concern) and 60% red (significant concern) thresholds if both the abundance and harvest thresholds are exceeded in either region in any three of the four terminal years. The thresholds are defined as the long-term mean of the reference period (2002-2012).

In 2020, the TLA for Atlantic croaker had red proportions that exceeded the threshold of 30% in both the harvest and abundance metrics in the Mid-Atlantic. The South Atlantic region harvest metric also triggered at 30% threshold in 2020. Exceeding the 30% threshold represents moderate concern to the fishery and initiated a moderate management response. All non-*de minimis* states were required to institute more restrictive measures in their recreational and commercial fisheries. Management measures were initiated in 2021 and are required to remain in place for three years, through 2023.

However, the TLA for fishing years 2021 and 2022 resulted in an unknown status due to data issues (e.g., missing years of data due to COVID, vessel changes in ChesMMAP) and uncertainty in how to interpret harvest metrics when management restrictions have been put in place. Additionally, the TLA was not run at all in 2023 due to data being unavailable and to allow the Atlantic Croaker and Spot Technical Committees to focus on assisting with the Atlantic croaker benchmark stock assessment. A benchmark stock assessment was expected in 2024 for Atlantic croaker. However, as of July 2024, the benchmark is still in development and is unlikely to be completed on time. Therefore, the Sciaenid Board requested the TLA be run for the August

2024 meeting. The Board requested the TLA focus only on the metrics used in management, not the supplemental information provided in previous TLA reports.

2 TRAFFIC LIGHT ANALYSIS RESULTS

2.1 Harvest Composite Index (Figure 1 and Figure 2)

- Harvest restrictions were put in place in 2021 in response to the 2020 TLA triggering at the 30% threshold. These restrictions are still in place and thus the harvest metrics cannot be interpreted for the purpose of a TLA, since lower landings get a red designation but measures have been put in place to lower landings.
- Landings in both regions remain low relative to the reference period (2002-2012). It is unknown if this is due to the harvest restrictions or a continued concern for this fishery.
- The Mid-Atlantic harvest exceeds 60% red in all four terminal years. The South Atlantic harvest exceeds 30% red in all four terminal years.
- This is the eighth consecutive year the harvest metric in both regions have exceeded the 30% threshold.

2.2 Abundance Composite Characteristic Index (Figure 3 and Figure 4)

- The Mid-Atlantic abundance index exceeded 30% red threshold in all four of the terminal years. It exceeded the 60% red threshold in two of the four terminal years. Therefore, the Mid-Atlantic abundance index triggered at the 30% level, indicating moderate concern.
- The South Atlantic abundance index did not trigger at 30% or 60% levels. The last four years are predominantly green or yellow, representing no concern.

3 SUMMARY

- Table 1 provides results of the past four years of TLA metrics for each region, as well as the current TLA status.
- Because the harvest metrics cannot be interpreted when management is in place to keep harvest low, interpretation of the TLA relies on the abundance composite indices. Although the South Atlantic abundance index did not trigger at any level, the Mid-Atlantic abundance index did exceed the 30% threshold in all four terminal years.
- The TC recommends maintaining current management measures.

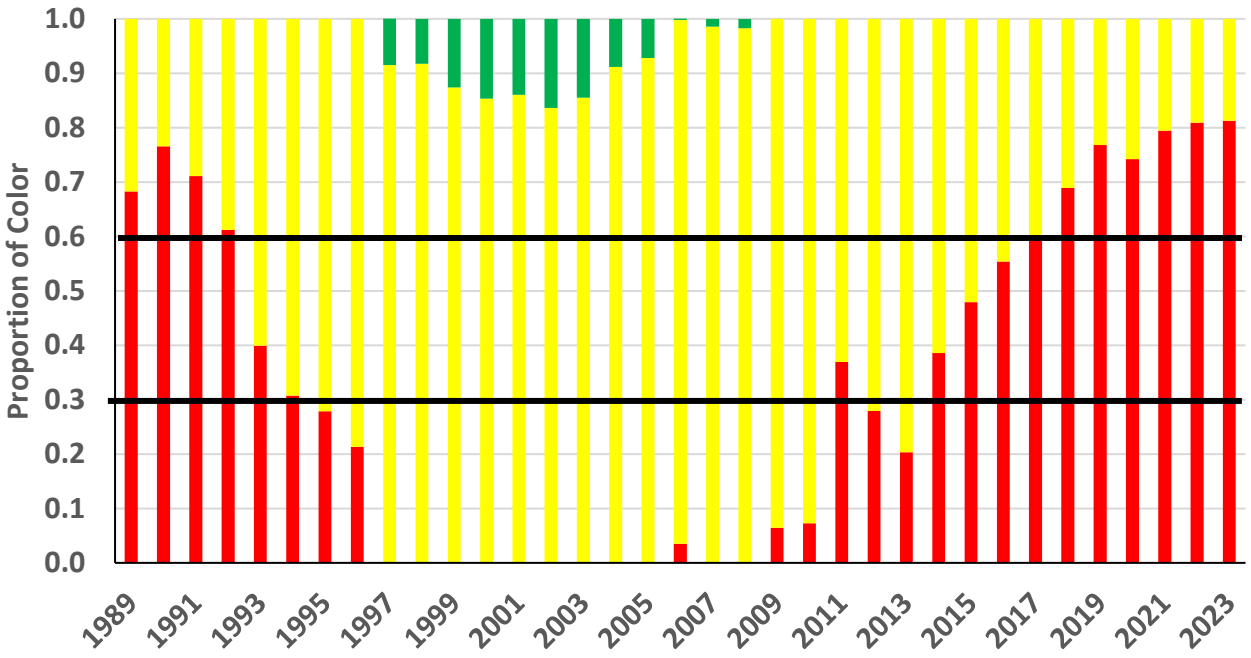


Figure 1. Annual TLA for Atlantic croaker harvest composite (commercial and recreational landings) in the Mid-Atlantic (NJ-VA from 1989-2023 using a 2002-2012 reference period.

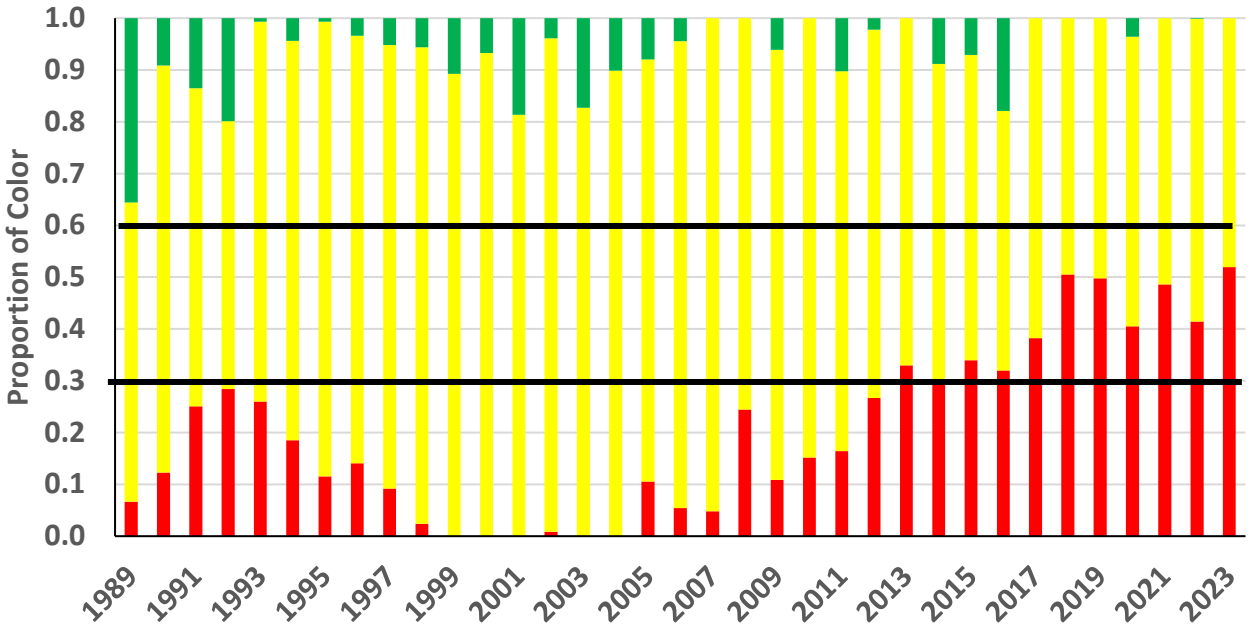


Figure 2. Annual TLA for Atlantic croaker harvest composite (commercial and recreational landings) in the South Atlantic (NC-FL) from 1989-2023 using a 2002-2012 reference period.

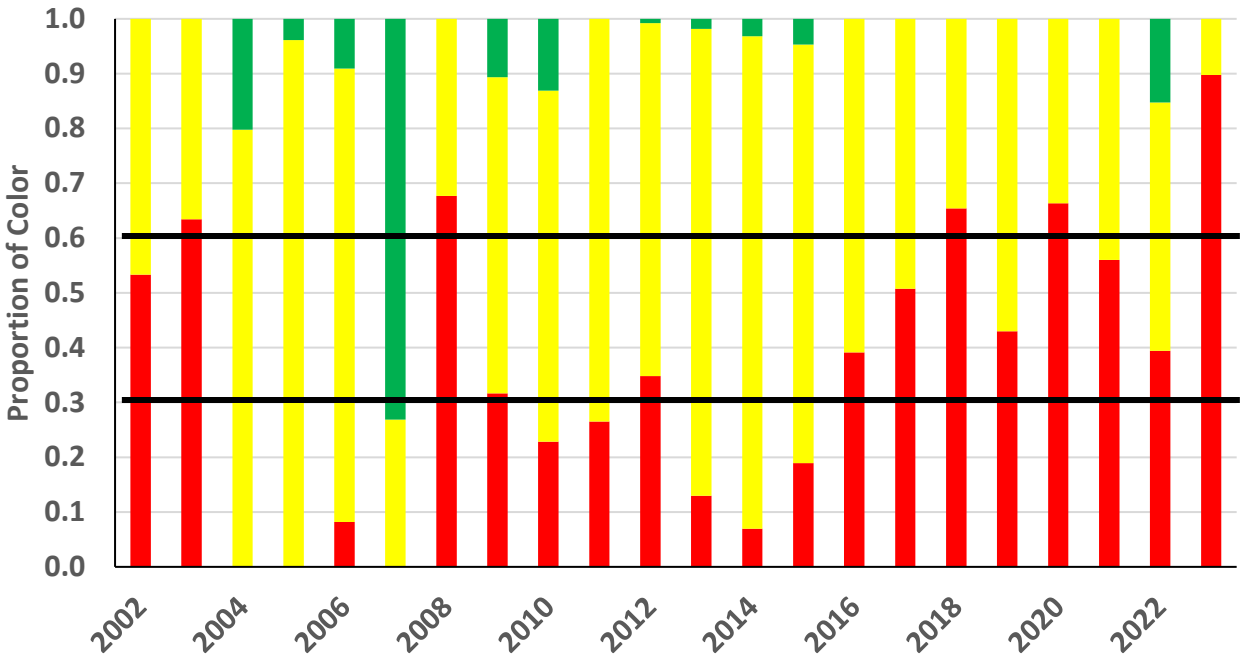


Figure 3. Annual TLA for adult (age 2+) Atlantic croaker composite abundance index in the Mid-Atlantic (NEFSC and ChesMMAP surveys) from 2002-2023 using a 2002-2012 reference period.

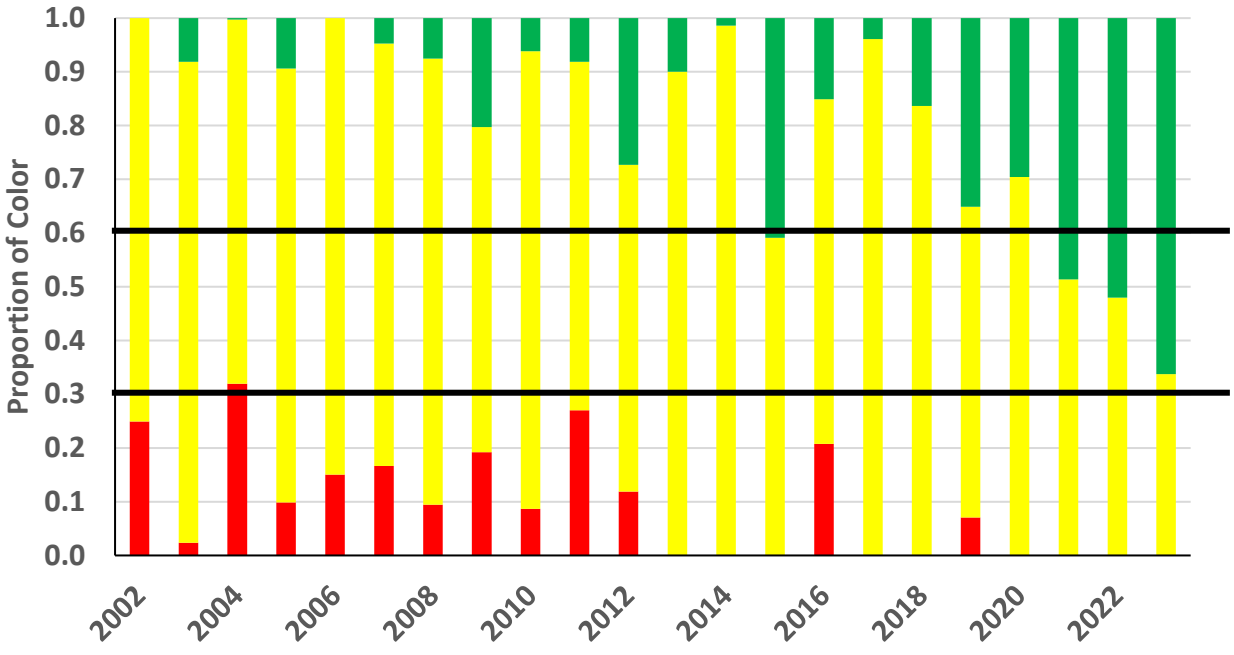


Figure 4. Annual TLA for adult (age 2+) Atlantic croaker composite abundance index in the South Atlantic (SEAMAP and SCDNR trammel survey) from 2002-2023 using a 2002-2012 reference period.

Table 1. Traffic light analysis results for the Mid- and South Atlantic regions for 2020-2023. There were some missing data in 2020 data (e.g., COVID, vessel changes). Management action is triggered according to the current 30% and 60% red thresholds if both the adult abundance and harvest metrics exceed these thresholds in any three of the four terminal years within either region.*

TLA Metric	Atlantic Croaker				2023 TLA Status
	2020	2021	2022	2023	
Mid-Atlantic Harvest*	74% red	79% red	81% red	81% red (triggered at 60%)	Unknown*
South Atlantic Harvest*	41% red	49% red	41% red	52% red (triggered at 30%)	
Mid-Atlantic Adult Index	66% red	56% red	39% red	90% red (triggered at 30%)	Triggered
South Atlantic Adult Index	Unknown	0% red	0% red	0% red (not triggered)	

*Harvest metrics cannot be interpreted as a trigger mechanism in the TLA at this time since catch restrictions to lower harvest were in place since 2021. As long as catch restrictions are in place, trigger status relies solely on the abundance indices.

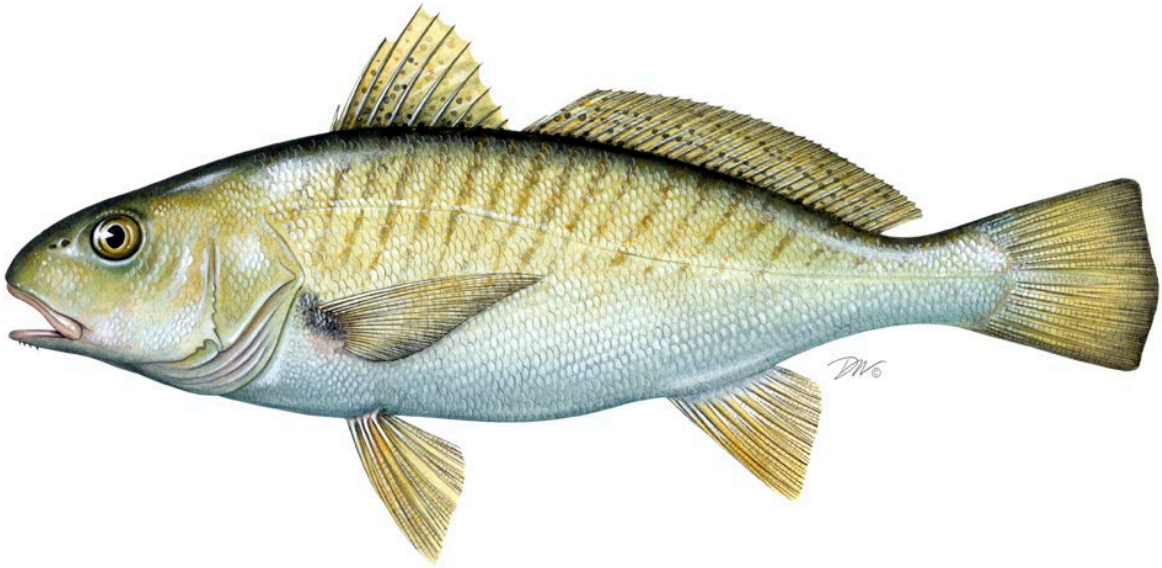
DRAFT FOR BOARD REVIEW

ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR ATLANTIC CROAKER
(Micropogonias undulatus)

2023 FISHING YEAR



Prepared by the Plan Review Team
Drafted July 2024

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

DRAFT FOR BOARD REVIEW

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DRAFT FOR BOARD REVIEW

I. Status of the Fishery Management Plan

Date of FMP Approval:	Original FMP – October 1987
Amendments:	Amendment 1 – November 2005 (implemented January 2006) Addendum I – March 2011 Addendum II – August 2014 Addendum III – February 2020
Management Areas:	The Atlantic coast distribution of the resource from New Jersey through Florida
Active Boards/Committees:	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.

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 X F_{MSY} (estimated to be 0.29); SSB threshold = 0.7 X 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 is an overfished status determination, and an F estimate above the F threshold resulted is 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 that already had 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 addendum 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.

Addendum 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, was not recommended for management use upon peer review. 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 recent abundance indices have shown increases while harvest has declined to some of the lowest levels on record. One factor thought 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, the Atlantic Croaker TC recommended several changes to the annual TLA through Addendum III. 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 now 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 Northeast Fisheries Science Center (NEFSC) surveys will be used to characterize abundance north of the state line, and SCDNR Trammel Net and Southeast Area Monitoring and Assessment Program (SEAMAP) surveys will be used to characterize abundance south of the state line.

III. Status of the Fishery

Total Atlantic croaker harvest (recreational and commercial) from New Jersey through the east coast of Florida in 2023 is estimated at 2.3 million pounds (Tables 2 and 3, Figure 1). This represents an 16% decrease in total harvest from 2022 (2.8 million pounds). The commercial and recreational fisheries harvested 22% and 78% of the 2023 total, respectively, which continues a trend that began in 2020, of the recreational fishery harvesting a majority (2020-2023 average=76%) of the total Atlantic croaker harvest. This represents a large shift from the historical spilt of recreational and commercial Atlantic croaker harvest, averaging 43% and 57%, 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 had a declining trend since then, from 47 million pounds in 2003 to 505,828 pounds in 2023, the lowest value of the time series (1950-2023). Within the management unit, the majority of 2023 commercial landings came from North Carolina (49%), Virginia (27%), and Florida (20%).

From 1981-2023, recreational landings of Atlantic croaker from New Jersey through Florida have varied by count between 5.1 million fish in 2022 and 36.2 million fish in 1986 and by weight between 1.8 million pounds in 2023 and 18.9 million pounds in 2003 (Tables 4 and 5, Figure 2). Landings generally increased from 1990 until 2003, after which they showed a declining trend through 2023. The 2023 landings are estimated at 5.5 million fish and 1.8

million pounds, similar to 2022's landings of 5.1 million fish and 2.1 million pounds. Virginia was responsible for 43% of the 2023 recreational landings, in numbers of fish, followed by Florida (16%), and South Carolina (14%).

The number of recreational releases generally increased over the time series until 2013 when releases steadily declined until reaching a low of 18.1 million fish released in 2018 (Table 5 and Figure 2). From 2018 through 2023, releases have overall been increasing again. In 2023, anglers released 34.9 million fish, an increase from the 30.5 million fish released in 2022. Anglers also released a greater percentage of the total recreational catch in 2023, compared to 2022. An estimated 86.4% of the total recreational croaker catch was released in 2023, the highest percentage on record for a third year in a row (Figure 2). The percentage of released recreational catch has shown an increasing trend from the 1990s through 2023.

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. Currently, a Traffic Light Analysis (TLA) is used to monitor the stock and make management decisions in lieu of an approved stock assessment. The TLAs can be found here. A benchmark stock assessment for Atlantic croaker is currently underway.

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. New Jersey, Delaware, Maryland, Potomac River Fisheries Commission (PRFC), Virginia, North Carolina, South Carolina, and Georgia conduct fishery-dependent (other than catch and effort data) monitoring programs. All states and jurisdictions conduct fishery-independent monitoring programs along the Atlantic coast from New Jersey to Florida.

The NEFSC performs a randomly stratified groundfish survey from Cape Hatteras, North Carolina to Maine. 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. Since 1994,

there has been an increase in annual catch variability. The NEFSC survey was not carried out in 2020 due to the COVID-19 pandemic, but was active again in 2021.

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 though the TLA by incorporating additional fishery-independent indices, age information, use of regional characteristics, and changes to the management-triggering mechanisms.

Traffic Light Approach

Harvest Composite Index (Figure 3 and Figure 4)

- Harvest restrictions were put in place in 2021 in response to the 2020 TLA triggering at the 30% threshold. These restrictions are still in place and thus the harvest metrics cannot be interpreted for the purpose of a TLA, since lower landings get a red designation but measures have been put in place to lower landings.
- Landings in both regions remain low relative to the reference period (2002-2012). It is unknown if this is due to the harvest restrictions or a continued concern for this fishery.
- The Mid-Atlantic harvest exceeds 60% red in all four terminal years. The South Atlantic harvest exceeds 30% red in all four terminal years.
- This is the eighth consecutive year the harvest metric in both regions have exceeded the 30% threshold.

Abundance Composite Characteristic Index (Figure 5 and Figure 6)

- The Mid-Atlantic abundance index exceeded 30% red threshold in all four of the terminal years. It exceeded the 60% red threshold in two of the four terminal years. Therefore, the Mid-Atlantic abundance index triggered at the 30% level, indicating moderate concern.
- The South Atlantic abundance index did not trigger at 30% or 60% levels. The last four years are predominantly green or yellow, representing no concern.

Conclusions

- Because the harvest metrics cannot be interpreted when management is in place to keep harvest low, interpretation of the TLA relies on the abundance composite indices. Although the South Atlantic abundance index did not trigger at any level, the Mid-Atlantic abundance index did exceed the 30% threshold in all four terminal years. This means the Atlantic croaker stock as a whole remains triggered.
- The TC recommends maintaining management enacted in 2021.

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. Addendum III, depending on the level of management action triggered, has exemptions for *de minimis* states when measures are triggered at the 30% level (see above for the TLA description). If the TLA triggers at the 60% level, then all states, including *de minimis*, must implement management measures.

In the annual compliance reports, the following states requested *de minimis* status: New Jersey (commercial and recreational fisheries), Delaware (commercial fishery), South Carolina (commercial fishery), and Georgia (commercial fishery). The commercial and recreational *de minimis* criteria for 2023 are based on 1% of the average coastwide 2021-2023 landings in each fishery. New Jersey, Delaware, South Carolina, and Georgia commercial fisheries all qualify for *de minimis* status, but landings are confidential. New Jersey's recreational fishery did not qualify for *de minimis* status, as the 3-year average of recreational landings for both states constituted more than 1% of the coastwide recreational landings, at 1.2%.

Changes to State Regulations

In 2020, the TLA triggered management measures at the 30% level, or moderate concern. Non *de minimis* states were required to implement management measures that instituted a 50 fish recreational bag limit and reduce the commercial harvest by 1% of the average state commercial harvest from the previous 10 years. If the state had more restrictive measures in place, they did not need to make any changes. All proposed management changes were reviewed by the Technical Committee and approved by the Board. Below is a list of states that who implemented measures in 2021:

- Virginia: 50 fish bag limit, charter allowance, and commercial fishery season closure from January 1 to January 15. Approved on March 23, 2021.
- North Carolina: 50 fish bag limit and a commercial fishery season closure from December 16 to December 31. Proclamation authority published on April 15, 2021.
- Florida: 50 fish bag limit and a commercial vessel limit of 1,200 pounds in state waters. Rule published December 1, 2021.

The Potomac River Fisheries Commission implemented a season closure for the Atlantic croaker commercial fishery from September 30 to December 31. It was approved on December 2, 2021.

For 2023, since Delaware has not requested *de minimis* status for its recreational fishery, they will be required to implement the 50 fish bag limit in order to stay in compliance with the FMP. The time requirement to implement this regulation is up to the Sciaenids Board.

Atlantic Croaker Habitat
In 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 are subject to both direct and indirect fishing mortality. Historically, Atlantic 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. 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.

Developed during the 2017 benchmark assessment, discard estimates of Atlantic croaker in the South Atlantic Shrimp Trawl Fishery are informed by catch rates observed during the SEAMAP survey and South Atlantic Shrimp Trawl Fishery Observer Program, and total effort of the South Atlantic Shrimp Trawl Fishery. Increases in discards could be an indicator of higher abundance of juveniles in the region, an increase in effort by the fishery, or a combination of both. Discard estimates of Atlantic croaker in the South Atlantic Shrimp Trawl Fishery were not calculated in 2024, as the Sciaenids Management Board directed the TCs to focus on updating only the Harvest and Abundance Characteristic Indices used for management. A summary of the most recent analysis can be found in the FMP Review for fishing year 2021, as the Atlantic croaker benchmark assessment is still ongoing. For additional information on the South Atlantic Shrimp Trawl Fishery discard estimation, see Appendix 1 of the 2020 TLA Update Report.

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 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 are 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 began a state monitoring program to account for bait landings in 2015. 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 final rule with an effective date of April 1, 2021 requiring all skimmer trawls greater than 40 feet in length to use TEDs. For all other vessels, the net must be emptied of catch on the deck within a specified time (84 FR 70048). 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 2023

The PRT found no inconsistences among states with regard to the requirements of Amendment 1 and Addendum III. However, Delaware will now be required to implement the 50 fish bag limit for their recreational fishery since they are no longer a *de minimis* state for their recreational fishery.

VIII. Recommendations

Management and Regulatory Recommendations

- Consider approval of the *de minimis* requests from New Jersey, Delaware, South Carolina, and Georgia for their commercial fisheries.
- Consider approval of the *de minimis* request from New Jersey for their recreational fishery. The PRT noted that New Jersey's recreational fishery exceeded the 1% *de minimis* threshold this year, which was the first year they have exceeded the threshold since 2017. The PRT agreed to recommend *de minimis* status for an additional year to confirm if there is a consistent trend of higher recreational landings of Atlantic croaker in New Jersey. The PRT will continue to monitor the situation and if New Jersey's Atlantic croaker recreational fishery exceeds the 1% threshold again next year, they will no longer recommend *de minimis* status.
- Research into the impacts of climate change on the range of the species.
- Research into Atlantic croaker juvenile discard mortality for recreational and commercial fisheries by each gear type in regions where removals are highest.

Research and Monitoring Recommendations

Additional research and monitoring recommendations can be found in the 2016 Atlantic Croaker Stock Assessment Peer Review Report here under Term of Reference 8.

IX. References

Atlantic States Marine Fisheries Commission (ASMFC). 1987. Fishery Management Plan for Atlantic Croaker. Washington (DC): ASMFC. Fishery Management Report No. 10. 90 p.

ASMFC. 2005a. Atlantic Croaker Stock Assessment & Peer Review Reports. Washington (DC): ASMFC. 370 p.

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ASMFC. 2010. Atlantic Croaker 2010 Benchmark Stock Assessment. Washington (DC): ASMFC. 366 p.

ASMFC. 2018. Memorandum 18-8: Recommended Updates to the Annual Traffic Light Analyses for Atlantic Croaker and Spot.

Brown, K. 2015. Characterization of the commercial shrimp otter trawl fishery in the estuarine and ocean (0-3 miles) waters of North Carolina. Morehead City (NC): NCDEQ, Division of Marine Fisheries. Abstract.

X. Figures

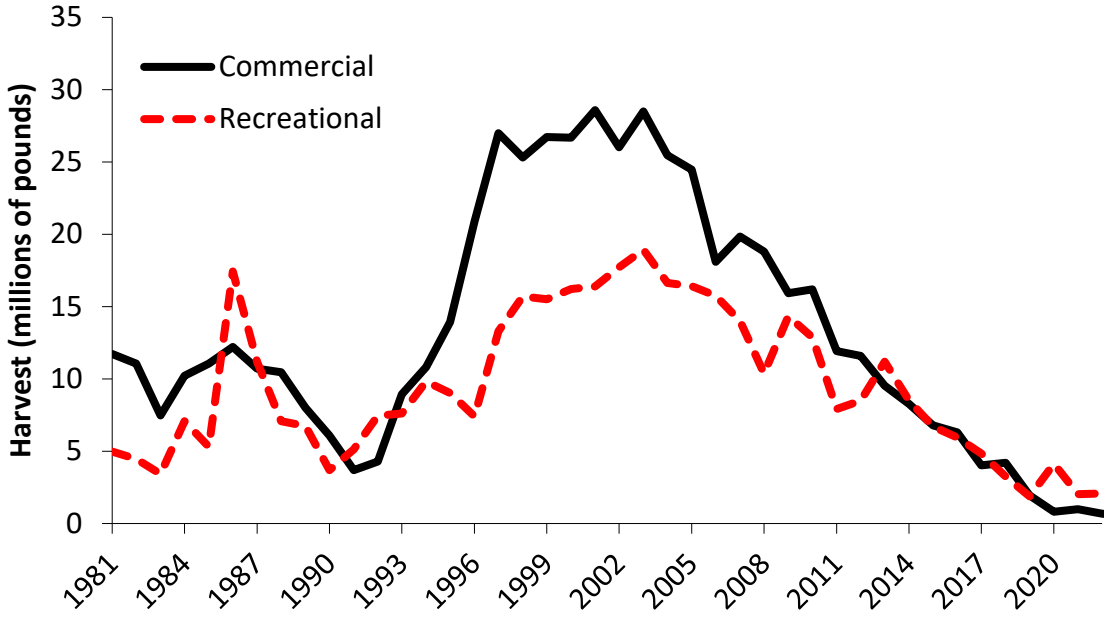


Figure 1. Atlantic croaker commercial and recreational landings (millions of pounds) from 1981-2023. (See Tables 2 and 3 for source information. Commercial landings estimates for 2023 is preliminary. Reliable recreational landings estimates are not available prior to 1981. Recreational landings estimates are based on the mail-based Fishing Effort Survey.)

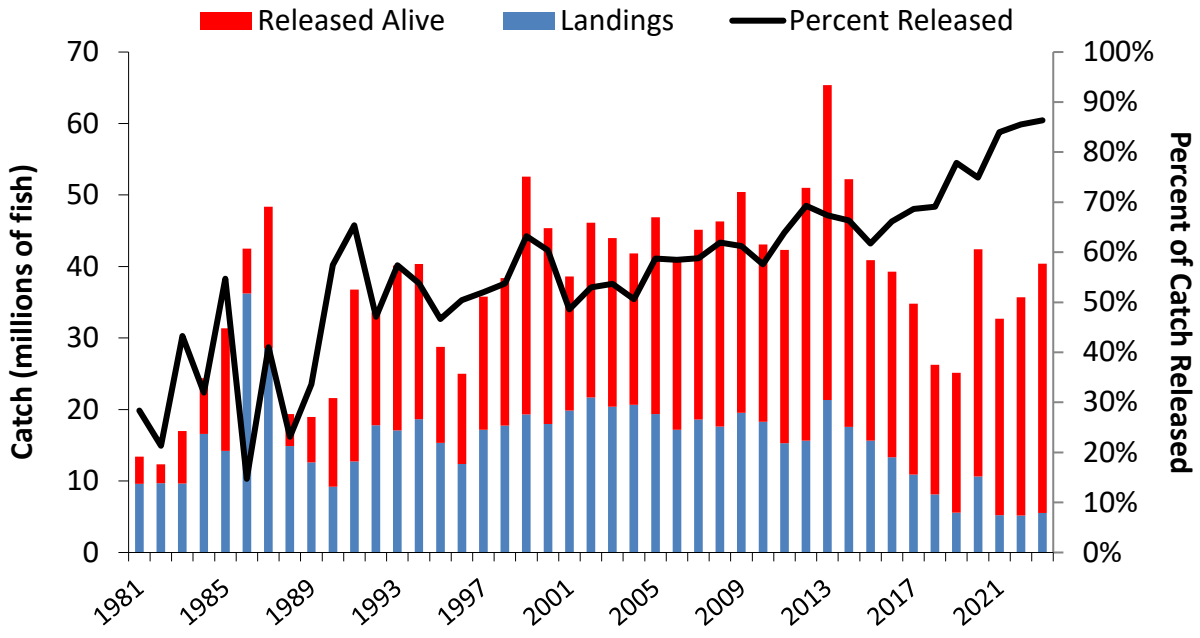


Figure 2. Recreational catch (landings and alive releases, in millions of fish) and the percent of catch that is released, 1981-2023, based on the mail-based Fishing Effort Survey calibration. (See Tables 4 and 5 for values and source information.)

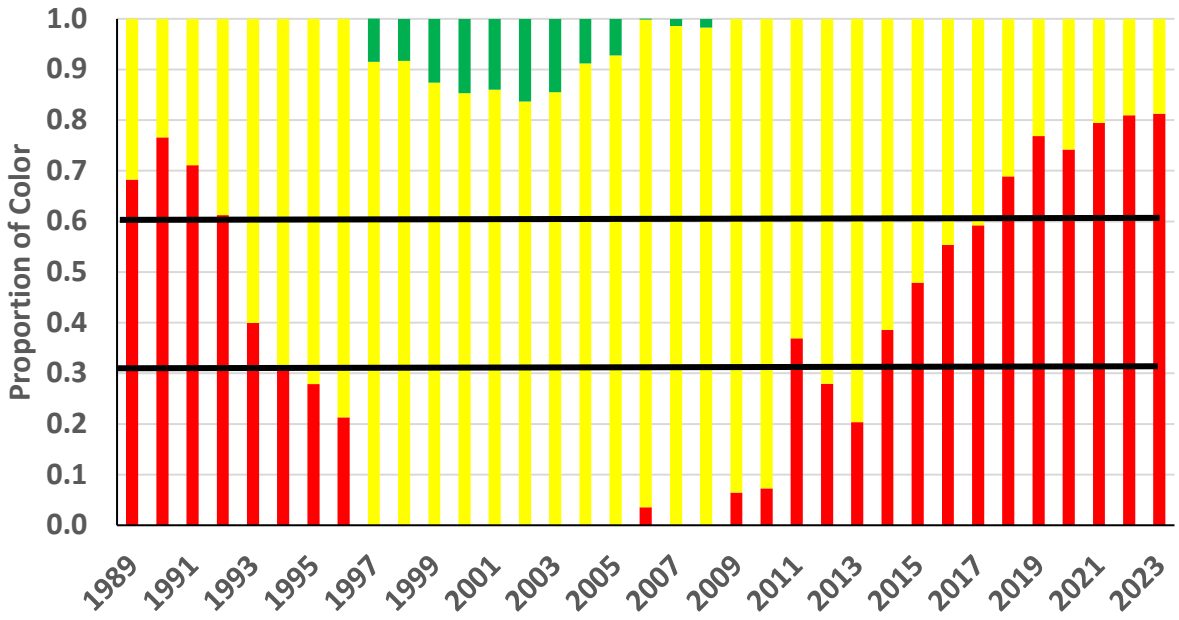


Figure 3. Annual TLA for Atlantic croaker harvest composite (commercial and recreational landings) in the Mid-Atlantic (NJ-VA from 1989-2023 using a 2002-2012 reference period.

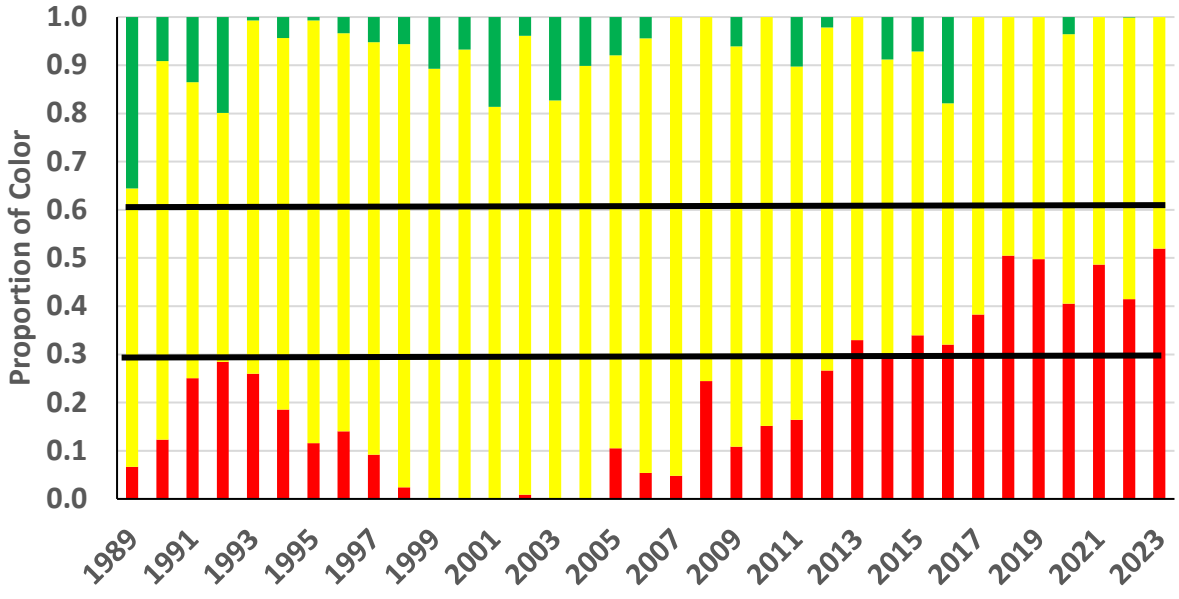


Figure 4. Annual TLA for Atlantic croaker harvest composite (commercial and recreational landings) in the South Atlantic (NC-FL) from 1989-2023 using a 2002-2012 reference period.

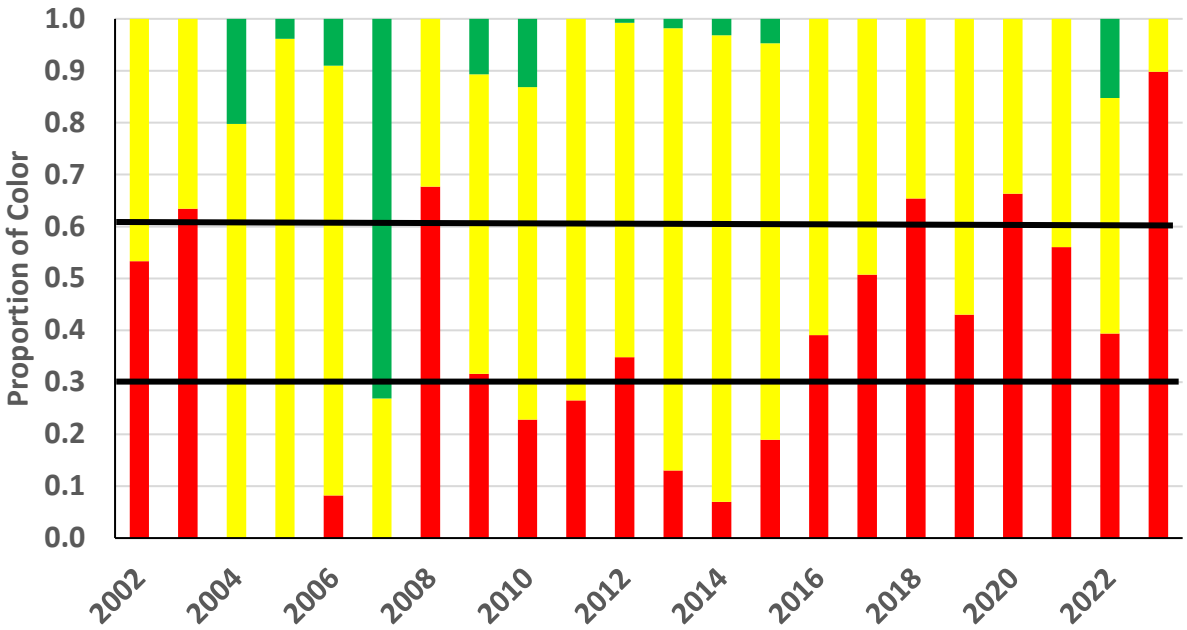


Figure 5. Annual TLA for adult (age 2+) Atlantic croaker composite abundance index in the Mid-Atlantic (NEFSC and ChesMMAP surveys) from 2002-2023 using a 2002-2012 reference period.

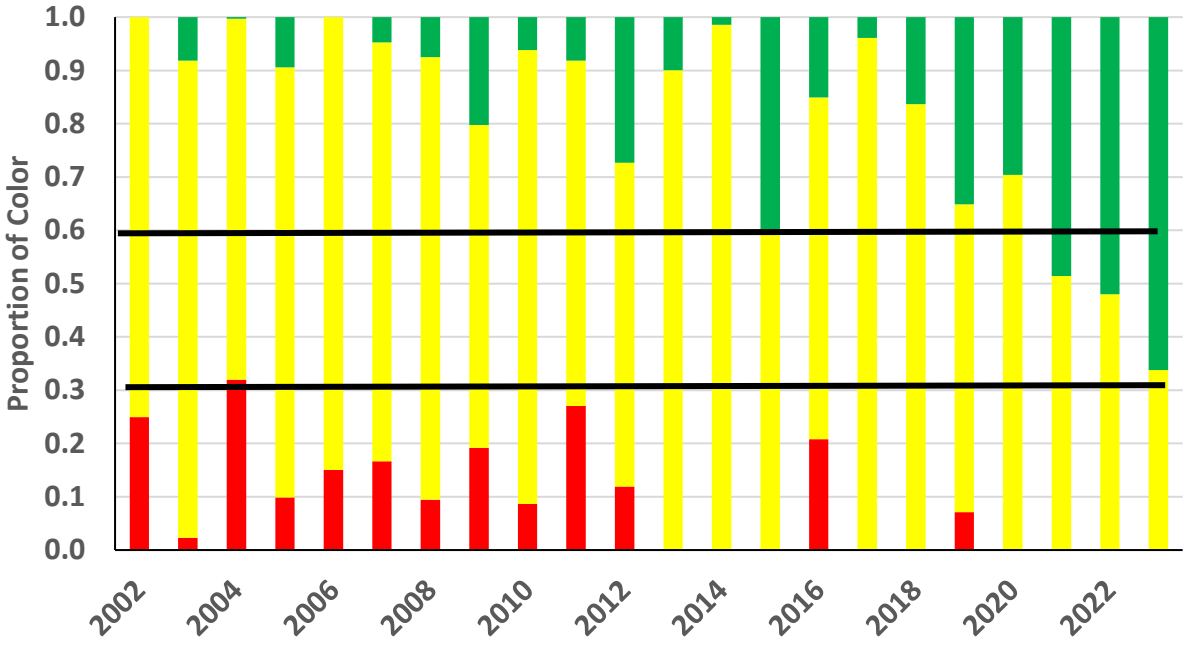


Figure 6. Annual TLA for adult (age 2+) Atlantic croaker composite abundance index in the South Atlantic (SEAMAP and SCDNR trammel survey) from 2002-2023 using a 2002-2012 reference period.

XI.
Tables

Table 1. Summary of state regulations for Atlantic croaker in 2023.

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	9” min, 25 fish/day	Open 1/1 to 9/30 (effective 1/1/22) Pound net season: 2/15 to 12/15
VA	50 fish/day, with additional charter live bait allowance (effective 3/23/21)	Open 1/15 to 12/31 (effective 3/23/21)
NC	50 fish/day (effective 4/15/21), recreational use of commercial gears with license and gear restrictions	Open 1/1 to 12/15 (effective 4/15/21)
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	50 fish/day (effective 12/1/21)	1,200 commercial vessel limit (effective 12/1/21)

* 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, 2014-2023.
(Estimates for 2023 are preliminary. Sources: 2024 state compliance reports for 2023 fishing year and for years prior to 2023, personal communication with ACCSP, except PRFC [compliance reports only].) Note that Georgia does not have a commercial fishery for Atlantic croaker.

Year	NJ	DE	MD	PRFC	VA	NC	SC	GA	FL	Total
2014	265,166	C	443,661	177,777	4,697,381	2,629,908	C		45,587	C
2015	C	C	294,038	118,996	4,426,957	1,819,007	C		39,096	6,784,146
2016	C	C	101,949	168,889	3,825,737	2,092,287	C		57,538	6,302,799
2017	C	C	42,958	114,319	2,822,005	1,008,015	C		43,033	4,032,993
2018	C	C	44,306	16,561	2,450,984	1,643,646	C		54,409	4,210,715
2019	C	463	2,865	C	595,434	1,278,340	C		68,179	1,945,723
2020	C	C	1,857	601	147,026	570,453	C		84,906	806,781
2021	C	C	4,584	11,430	287,898	540,622	C		124,642	972,121
2022	C	773	3,944	C	193,161	357,312	C		117,958	684,464
2023	9,981	C	C	C	134,392	249,390	C		101,450	505,828

C: Confidential data

Table 3. Recreational harvest (pounds) of Atlantic croaker by state, 2014-2023. (Sources: 2024 state compliance reports for 2023 fishing year and for years prior to 2023, personal communication with MRIP)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
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
2020	16,358	21,870	91,047	2,410,612	223,685	230,205	77,876	1,072,714	4,144,367
2021	7,079	35,746	69,744	823,319	376,121	173,526	95,031	461,048	2,041,614
2022	33,048	22,483	21,043	554,254	481,721	240,275	152,231	577,555	2,082,610
2023	31,709	42,567	40,788	499,010	201,056	313,242	116,558	584,977	1,829,907

Table 4. Recreational harvest (numbers) of Atlantic croaker by state, 2014-2023. (Sources: 2024 State compliance reports for 2023 fishing year and for years prior to 2023, personal communication with MRIP)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
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
2020	58,097	54,193	244,788	6,529,494	673,377	827,904	232,535	2,010,168	10,630,556
2021	22,722	71,237	174,056	1,862,543	1,066,533	707,924	371,257	952,581	5,228,853
2022	91,584	64,397	55,408	1,969,042	1,110,382	545,062	394,967	942,037	5,172,879
2023	104,481	86,227	151,628	2,364,942	597,690	779,691	535,875	890,684	5,511,218

Table 5. Recreational releases (number) of Atlantic croaker by state, 2014-2023. (Sources: 2024 state compliance reports for 2023 fishing year and for years prior to 2023, personal communication with MRIP)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
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
2020	147,494	286,780	2,870,268	6,223,025	5,560,605	12,921,019	1,696,852	2,057,158	31,763,201
2021	116,606	353,743	1,909,466	4,306,221	9,539,047	8,207,074	1,687,801	1,363,075	27,483,033
2022	74,058	467,349	1,537,746	7,193,201	7,914,042	8,359,506	2,056,650	2,901,874	30,504,426
2023	1,380,298	588,623	2,939,081	8,537,665	4,722,440	13,901,122	1,643,243	1,166,700	34,879,172

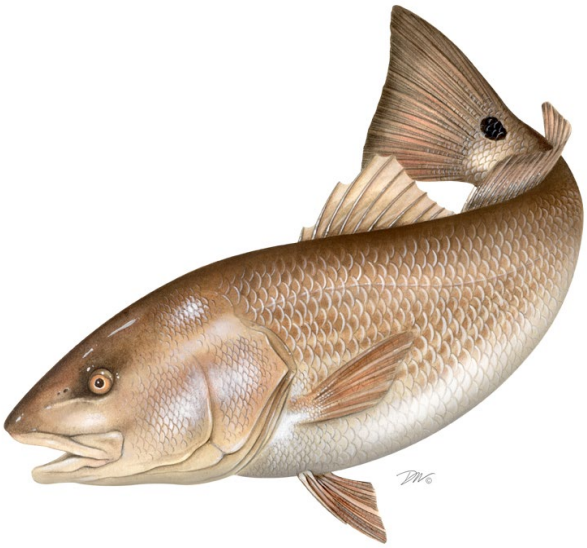
ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR

RED DRUM
(*Sciaenops ocellatus*)

2023 FISHING YEAR



Prepared by the Plan Review Team
Drafted July 2024

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

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DRAFT FOR BOARD REVIEW

I. Status of the Fishery Management Plan

Date of FMP Approval:	Original FMP – October 1984
Amendments & Addenda:	Amendment 1 – October 1991 Amendment 2 – June 2002 Addendum 1 – August 2013
Management Areas:	The Atlantic coast distribution of the resource from New Jersey through Florida Northern: New Jersey through North Carolina Southern: South Carolina through the east coast of Florida
Active Boards/Committees:	Sciaenids Management Board, Red Drum Technical Committee, Stock Assessment Subcommittee, Plan Development Team, Plan Review Team, South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted an Interstate Fishery Management Plan (FMP) for Red Drum in 1984. The original management unit included the states from Maryland to Florida. In 1988, the Interstate Fisheries Management Program (ISFMP) Policy Board requested all Atlantic coastal states from Maine to Florida implement the plan's recommended management regulations to prevent development of northern markets for southern fish. The states of New Jersey through Florida are now required to follow the FMP, while Maine through New York (including Pennsylvania) are encouraged to implement consistent provisions to protect the red drum spawning stock.

In 1990, the South Atlantic Fishery Management Council (Council) adopted an FMP for red drum that defined overfishing and optimum yield (OY) consistent with the Magnuson Fishery Conservation and Management Act of 1976. Adoption of this plan prohibited the harvest of red drum in the exclusive economic zone (EEZ), a moratorium that remains in effect today. Recognizing all harvest would take place in state waters, the Council FMP recommended states implement measures necessary to achieve the target level of at least 30% escapement.

Consequently, ASMFC initiated Amendment 1 in 1991, which included the goal to attain optimum yield from the fishery over time. Optimum yield was defined as the amount of harvest that could be taken while maintaining the level of spawning stock biomass per recruit (SSBR) at or above 30% of the level which would result if fishing mortality was zero. However, a lack of information on adult stock status resulted in the use of a 30% escapement rate of sub-adult red drum to the off-shore adult spawning stock.

Substantial reductions in fishing mortality were necessary to achieve the escapement rate; however, the lack of data on the status of adult red drum along the Atlantic coast led to the adoption of a phase-in approach with a 10% SSBR goal. In 1991, states implemented or maintained harvest controls necessary to attain the goal.

As hoped, these management measures led to increased escapement rates of juvenile red drum. Escapement estimates for the northern region of New Jersey through North Carolina

(18%) and the southern region of South Carolina through Florida (17%) were estimated to be above the 10% phase-in goal, yet still below the ultimate goal of 30% (Vaughan and Carmichael 2000). North Carolina, South Carolina, and Georgia implemented substantive changes to their regulations from 1998-2001 that further restricted harvest.

The Council adopted new definitions of OY and overfishing for red drum in 1998. Optimum yield was redefined as the harvest associated with a 40% static spawning potential ratio (sSPR), overfishing as an sSPR less than 30%, and an overfishing threshold as 10% sSPR. In 1999, the Council recommended management authority for red drum be transferred to the states through the Commission's Interstate Fishery Management Program (ISFMP) process. This was recommended, in part, due to the inability to accurately determine an overfished status, and therefore stock rebuilding targets and schedules, as required under the revised Sustainable Fisheries Act of 1996. The transfer necessitated the development of an amendment to the interstate FMP in order to include the provisions of the Atlantic Coastal Fisheries Cooperative Management Act.

ASFMC adopted Amendment 2 to the Red Drum FMP in June 2002 (ASMFC 2002), which serves as the current management plan. The goal of Amendment 2 is to achieve and maintain the OY for the Atlantic coast red drum fishery as the amount of harvest that can be taken by U.S. fishermen while maintaining the sSPR at or above 40%. There are four plan objectives:

- Achieve and maintain an escapement rate sufficient to prevent recruitment failure and achieve an sSPR at or above 40%.
- Provide a flexible management system to address incompatibility and inconsistency among state and federal regulations which minimizes regulatory delay while retaining substantial ASMFC, Council, and public input into management decisions; and which can adapt to changes in resource abundance, new scientific information, and changes in fishing patterns among user groups or by area.
- Promote cooperative collection of biological, economic, and sociological data required to effectively monitor and assess the status of the red drum resource and evaluate management efforts.
- Restore the age and size structure of the Atlantic coast red drum population.

The management area extends from New Jersey through the east coast of Florida, and is separated into a northern and southern region at the North Carolina/South Carolina border. The sSPR of 40% is considered a target; an sSPR below 30% (threshold level) results in an overfishing determination for red drum. Amendment 2 required all states within the management unit to implement appropriate recreational bag and size limit combinations needed to attain the target sSPR, and to maintain current, or implement more restrictive, commercial fishery regulations. All states were in compliance by January 1, 2003. See Table 1 for state commercial and recreational regulations in 2022.

Following the approval of Amendment 2 in 2002, the process to transfer management authority to ASMFC began, including an Environmental Assessment and public comment period. The final

rule became effective November 5, 2008. It repeals the federal Atlantic Coast Red Drum Fishery Management Plan and transfers management authority of Atlantic red drum in the exclusive economic zone from the South Atlantic Fishery Management Council to the Atlantic States Marine Fisheries Commission.

The Board approved Addendum I to Amendment 2 in August 2013. The Addendum revised the habitat section of Amendment 2 to include current information on red drum spawning habitat and life-stages (egg, larval, juvenile, sub-adult, and adult). It also identified and described the distribution of key habitats and habitats of concern.

II. Status of the Stocks

The 2017 Red Drum Stock Assessment and Peer Review Report indicated overfishing was not occurring for either the northern or southern stock of red drum (ASMFC 2017). The assessment was unable to determine an overfished/not overfished status because population abundance could not be reliably estimated due to limited data for the older fish (ages 4+). A simulation assessment was recently completed, providing a roadmap for future red drum stock assessments through the ASMFC process, with a planned benchmark assessment to follow; all work will be completed by the end of 2024. Results of the 2017 assessment for both the Northern Region and Southern Region are given below.

Northern Region (NJ-NC)

Recruitment (age 1 abundance) has varied annually with a large peak occurring in 2012 (Figure 1). The trend in the three-year average sSPR indicates low sSPR early in the time series with increases during 1991 – 1997 and fluctuations thereafter (Figure 2). The average sSPR has been above the overfishing threshold ($F_{30\%}$) since 1994, and at or above the target ($F_{40\%}$) since 1996, except during one year (2002). Fishing pressure and mortality appear to be stabilized near the target fishing mortality. The average sSPR is also likely above the target benchmark.

Southern Region (SC-FL)

Recruitment (age 1 abundance) has fluctuated without apparent trend since 1991 (Figure 1). A high level of uncertainty exists around the three-year average sSPR estimates for the southern region. While the 3-year average sSPR estimate in 2013 was above both the target ($F_{40\%}$) and the overfishing threshold ($F_{30\%}$), indicating that overfishing is not occurring, the high level of uncertainty around this estimate indicates this conclusion should be considered with extreme caution (Figure 2).

NOTE: In 2018, the Marine Recreational Information Program (MRIP) transitioned from estimating effort using the Coastal Household Telephone Survey (CHTS) to the mail-based Fishing Effort Survey (FES). The 2017 stock assessment used CHTS data to estimate recreational harvest. However, as red drum is not managed by a quota and to accommodate the transition, recreational harvest estimates based on the FES data or calibration are shown in this report. Due to differing estimation methodologies, these harvest data should not be compared to reference points from the 2017 stock assessment.

III. Status of the Fishery

Red drum landings from New Jersey through the east coast of Florida in 2023 are estimated at 5.0 million pounds (Tables 3 and 4; Figure 3). In 2023, 61% of the total landings came from the southern region where the fishery is exclusively recreational, and 39% from the northern region (Figure 4). Since 2019, the northern region averaged 43% of the total harvest and the southern region averaged 57% of the total harvest. This is a significant change from the historic regional landings split (1981-2019), which averaged 76% from the southern region and 24% from the northern region.

Northern Region (NJ-NC)
Red drum landings in the northern region totaled 1.9 million pounds in 2023, a decrease of approximately 24% from the previous year (Tables 3 and 4). There was an increase in commercial landings and a decline in recreational landings. Commercial landings totaled 203,512 pounds or 10% of the combined commercial and recreational harvest in the northern region, with 91% of commercial landings coming from North Carolina (Figure 5). This is a 6% increase in commercial landings from 2022. In North Carolina, a daily commercial trip limit and an annual cap of 250,000 pounds with payback of any overage constrained the commercial harvest. Unique to this state, the red drum fishing year extends from September 1 to August 31. In 2008, the Board approved use of this fishing year to monitor the cap. During the 2022/2023 fishing year, North Carolina landed 189,013 pounds of the 250,000-pound annual landings cap.

Recreational landings in the northern region in 2023 were estimated to be 1.8 million pounds, a decline from the previous year's estimates of recreational harvest at 2.6 million pounds (Table 4). North Carolina is estimated to have 1.1 million pounds of recreational landings, followed by Virginia with 0.6 million pounds. Virginia and North Carolina red drum recreational landings decreased by 23% and 31% from the previous year, respectively. The number of fish harvested in the recreational fishery in 2023 was 387,092 fish, a decline of 22% from 2022 (Table 5). The number of fish released in the northern region, 2.7 million fish, in 2023 declined by 9% from 2022, at 2.9 million fish (Figure 6). It is estimated that 8% of released fish die as a result of being caught, resulting in an estimated 214,818 dead discarded fish in 2023 (Table 6). Recreational removals from the fishery are thus estimated to be 601,910 fish in 2023 (Figure 6 and 7).

Southern Region (SC-FL)
The southern region had no commercial landings; Florida commercial harvest has been prohibited since January 1988. South Carolina and Georgia designated red drum as a gamefish, banning commercial harvest and sale since 1987 and 2013, respectively.

Recreational landings in the southern region in 2023 were estimated to be 3.0 million pounds, a 7% decline from 2022 (Table 4). Florida is estimated to have 1.5 million pounds of recreational landings, followed by Georgia with 0.8 million pounds, and South Carolina with 0.7 million pounds. While recreational landings in Florida in 2023 were similar to 2022, recreational landings in Georgia and South Carolina declined by 24% and 18%, respectively. The number of fish harvested in the recreational fishery in 2023 was 1.0 million fish, which was a slight decline

from recreational harvest in 2022 (1.2 million fish; Table 4). The number of fish released in the southern region in 2023 was 8.5 million fish, which was an increase of 17% from 2022 when 7.3 million fish were released (Figure 6). It is estimated that 8% of released fish die as a result of being caught, resulting in an estimated 682,563 dead discarded fish in 2023 (Table 6). Recreational removals from the fishery are thus estimated to be 1.7 million fish in 2023 (Figure 6 & 7).

IV. Status of Assessment Advice

Current stock status information comes from the 2017 stock assessment (ASMFC 2017) completed by the ASMFC Red Drum Stock Assessment Subcommittee (SAS) and Technical Committee (TC), peer reviewed by an independent panel of experts through ASMFC's desk review process, and approved by the South Atlantic State-Federal Fisheries Management Board for use in management decisions. The approved base model from this assessment is a statistical catch-at-age model. Previous interstate management decisions were based on the last coastwide assessment, SEDAR 18 (SAFMC 2009), and prior to 2009, decisions were based on regional assessments conducted by Vaughan and Helser (1990), Vaughan (1992, 1993, 1996), and Vaughan and Carmichael (2000) that reflected the current stock structure, two stocks divided at the North Carolina-South Carolina border. Several states have also conducted state-specific assessments (e.g., Murphy and Munyandorero 2009; Takade and Paramore 2007 [update of Vaughan and Carmichael 2000]).

In 2017, a state-specific stock assessment was completed by South Carolina, which indicated the South Carolina population of red drum was experiencing overfishing (Murphy 2017). This assessment result prompted new state management regulations, which went into effect on July 1, 2018 (Table 1).

In 2020, Florida completed a stock assessment for red drum in Florida state waters, and found the Atlantic Coast red drum stock was not overfished and overfishing was not occurring (Addis 2020). The northeast region (Flagler through Nassau counties) exceeded the Commission's target escapement rate of 40%. The formally defined southeast region (Miami-Dade-Volusia counties) exceeded the escapement rate in the terminal year (2019), but does not meet the current escapement rate target. Overall, the state of Florida has an escapement rate higher than the Commission's goal of 40%.

At the Winter meeting of ASMFC in 2019, the Board reviewed a proposal from the SAS that recommended a population simulation model be developed to simulate the full red drum population. The simulated population would be used to test a variety of assessment modeling techniques to determine which model would be the most applicable for the next benchmark stock assessment. Due to the work and modeling expertise needed for the simulation assessment, the benchmark assessment was postponed until 2024. The Red Drum Simulation Assessment and Peer Review Report was accepted by the Board at their May 2022 meeting. The Peer Review Panel recommended the Stock Synthesis model should be used to assess the northern (from New Jersey – North Carolina) and southern (from South Carolina – Florida) red drum stocks, while the statistical catch-at-age model should not be used. The Panel also

recommended using a traffic light approach to monitor changes in landings and stock abundance in between assessments. A new benchmark assessment for red drum is currently in progress and is scheduled to be complete in Fall 2024.

V. Status of Research and Monitoring

No monitoring or research programs are annually required of the states except for the submission of a compliance report. Fishery-dependent (other than catch and effort data) monitoring programs are conducted from Maryland to Florida, with biological and sportfish carcass recovery programs collecting age, length, and sex data. Virginia, North Carolina, and South Carolina also conduct sportfish tagging programs. Fishery-independent monitoring programs that directly target or may encounter red drum are conducted in New Jersey, Delaware, North Carolina, South Carolina, Georgia, and Florida. Data collected includes CPUE, biological data, YOY indices, and mark-recapture data. See Table 2 for details on the fishery independent indices and ongoing surveys.

VI. Status of Management Measures and Issues

Fishery Management Plan

Amendment 2 was fully implemented by January 1, 2003, providing the management requirements for 2022. Requirements include: recreational regulations designed to achieve at least 40% sSPR, a maximum size limit of 27 inches or less, and current or more stringent commercial regulations. States are also required to have in place law enforcement capabilities adequate to successfully implement their red drum regulations. In August 2013, the Board approved Addendum I to Amendment 2 of the Red Drum FMP. The Addendum revises the habitat section of Amendment 2 to include the most current information on red drum spawning habitat for each life stage (egg, larval, juvenile, sub-adult, and adult). It also identifies the distribution of key habitats and habitats of concern, including potential threats and bottlenecks.

De Minimis Requests

New Jersey and Delaware requested *de minimis* status through the annual reporting process. While Amendment 2 does not include a specific method to determine whether a state qualifies for *de minimis*, the PRT chose to evaluate an individual state's contribution to the fishery by comparing the two-year average of total landings of the state to that of the management unit. New Jersey and Delaware each harvested zero percent of the two-year average of total landings. *De minimis* status does not exempt either state from any requirement; it may exempt them from future management measures implemented through addenda to Amendment 2, as determined by the Board.

VII. Implementation of FMP Compliance Requirements for 2023

The PRT found no inconsistences between state compliance reports and the requirements of Amendment 2.

VIII. Recommendations of the Plan Review Team

<u>Management and Regulatory Recommendations</u>

Consider approval of the *de minimis* requests by New Jersey and Delaware.

Research Recommendations

Additional research recommendations can be found in the most recent stock assessment found here and the 2022 Simulation Assessment and peer review report here. The PRT had the additional research recommendations:

- Implement surveys (e.g., logbooks, electronic methods, etc.) to determine the length composition (and age data, if possible) of recreational discards (B2) of red drum. This information has been highlighted as the single largest data gap in previous assessments.

- Continue sampling of adult red drum surveys to determine abundance, size, age, sex composition, and maturity of the adults. Additionally, investigate the possibility of senescence in female red drum. Investigate how targeting of adult red drum spawning and post-spawning aggregations via catch-and-release hook-and-line fisheries by anglers is affecting the reproductive potential of the stock due to both direct lethal and sub-lethal effects.

- Assess the effects of environmental factors and habitat loss on stock density/year class strength. Determine whether natural environmental perturbations and habitat loss affect recruitment and modify relationships with spawning stock size.

- Support and conduct applied research to evaluate the social and economic value of this important, primarily recreational fishery. Accomplishing this includes continued support of the Marine Recreational Fishing Expenditures Survey that is conducted every three to five years by NOAA Fisheries as well as conducting applied research on projecting social and/or economic estimated impacts associated with this fishery.

IX. References

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X. Figures

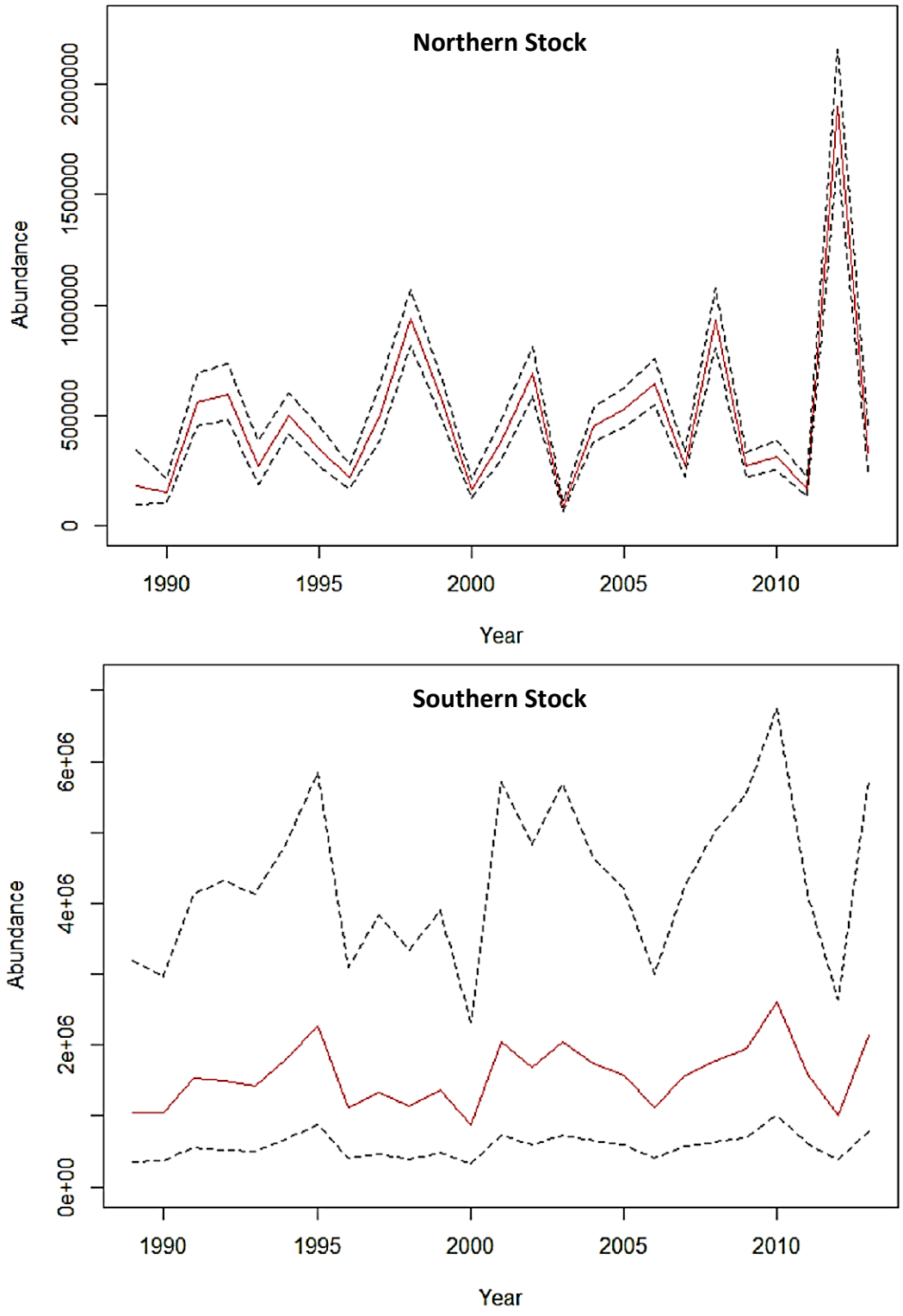

Figure 1. Predicted recruitment (age-1 abundance, red lines) with 95% confidence intervals (dashed black lines) for the northern (top) and southern (bottom) regions (Source: ASMFC 2017).

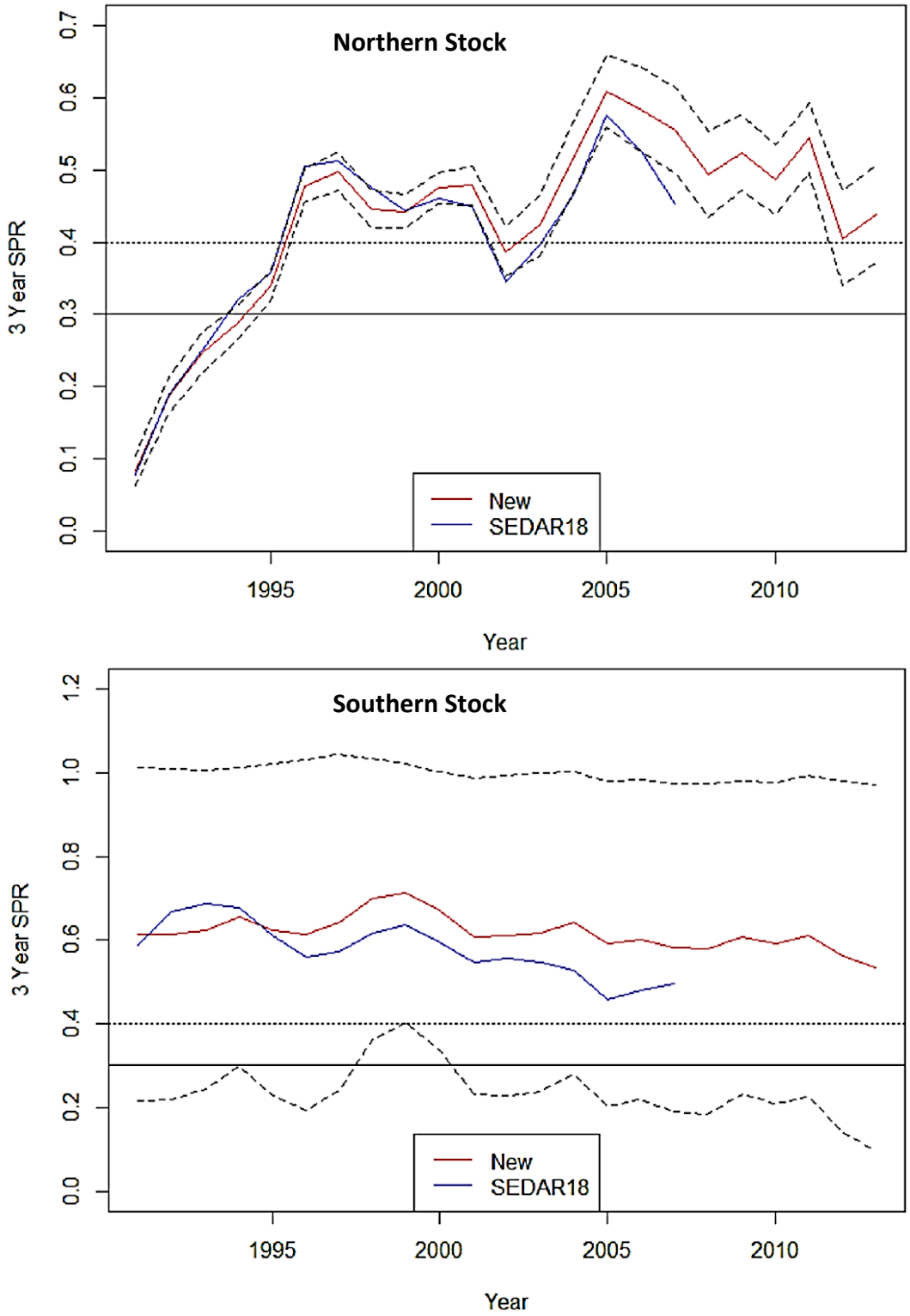

Figure 2. Three-year average sSPR (red lines) for the northern (top) and southern (bottom) stocks with 95% confidence intervals (dashed black lines). Point estimates from the previous benchmark assessment (SEDAR18) are included for comparison. The target sSPR (dotted black line) is 40% and the threshold sSPR (solid black line) is 30% (Source: ASMFC 2017)**.**

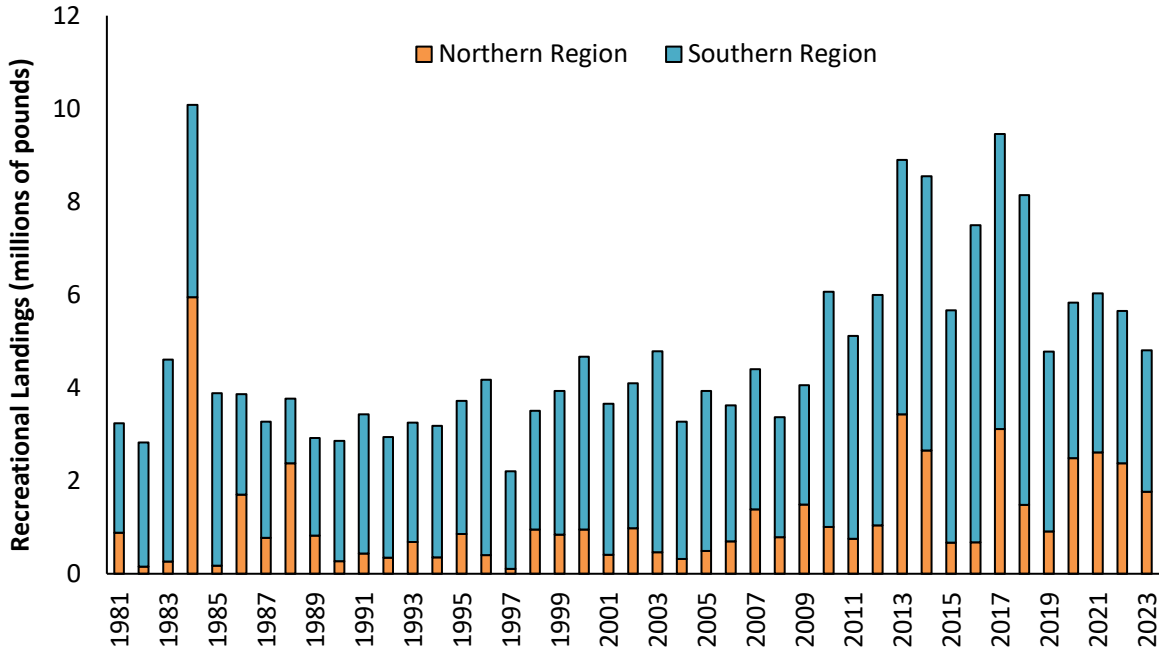

Figure 3. Recreational landings of red drum by region (1981-2023). See Table 4 for values and data sources.

*Recreational weight data for NC-FL in 1988 is unavailable. Recreational harvests in pounds were estimated for these states in this year by multiplying each state's 1988 harvest in numbers of fish by its time series average weight.

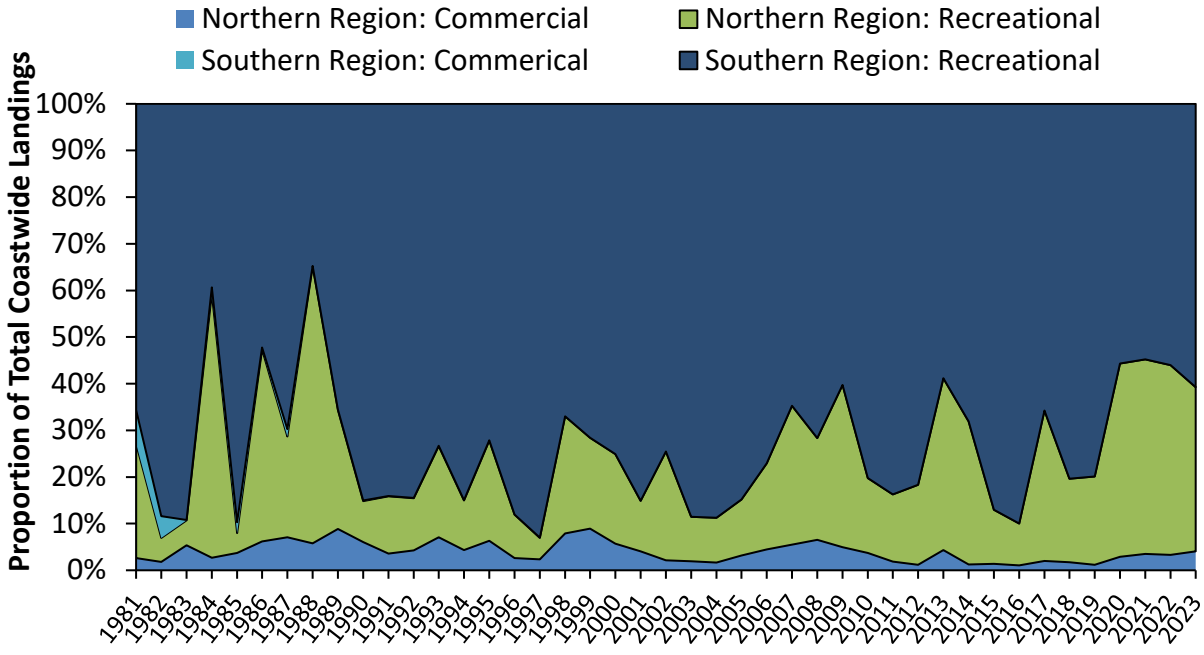

Figure 4. Proportion of regional, sector-specific landings to total coastwide landings (pounds) from 1981-2023. See Tables 3 and 4 for data sources.

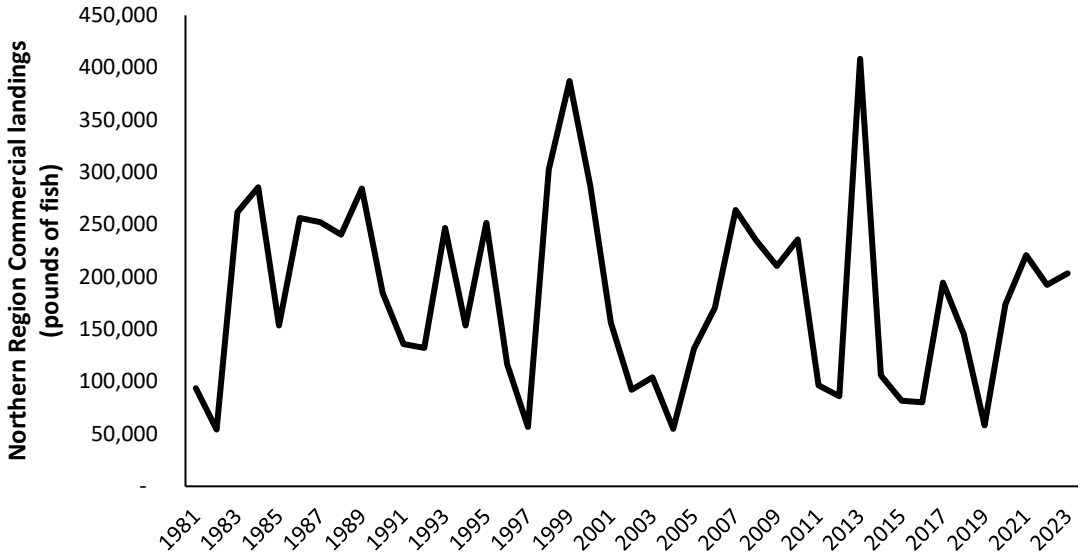

Figure 5. Commercial landings of red drum from the Northern Region (1981-2023). See Table 3 for values and data sources.

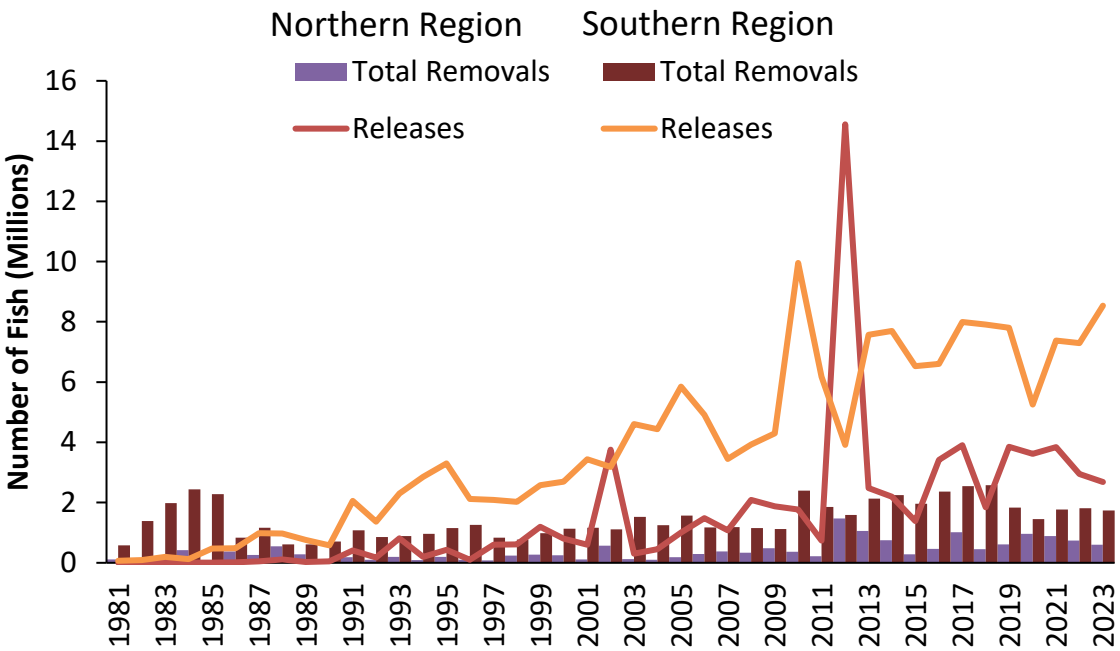

Figure 6. Total recreational removals (numbers) compared to recreational releases of red drum (numbers) for 1981-2023. See Tables 5 and 6 for values and data sources.

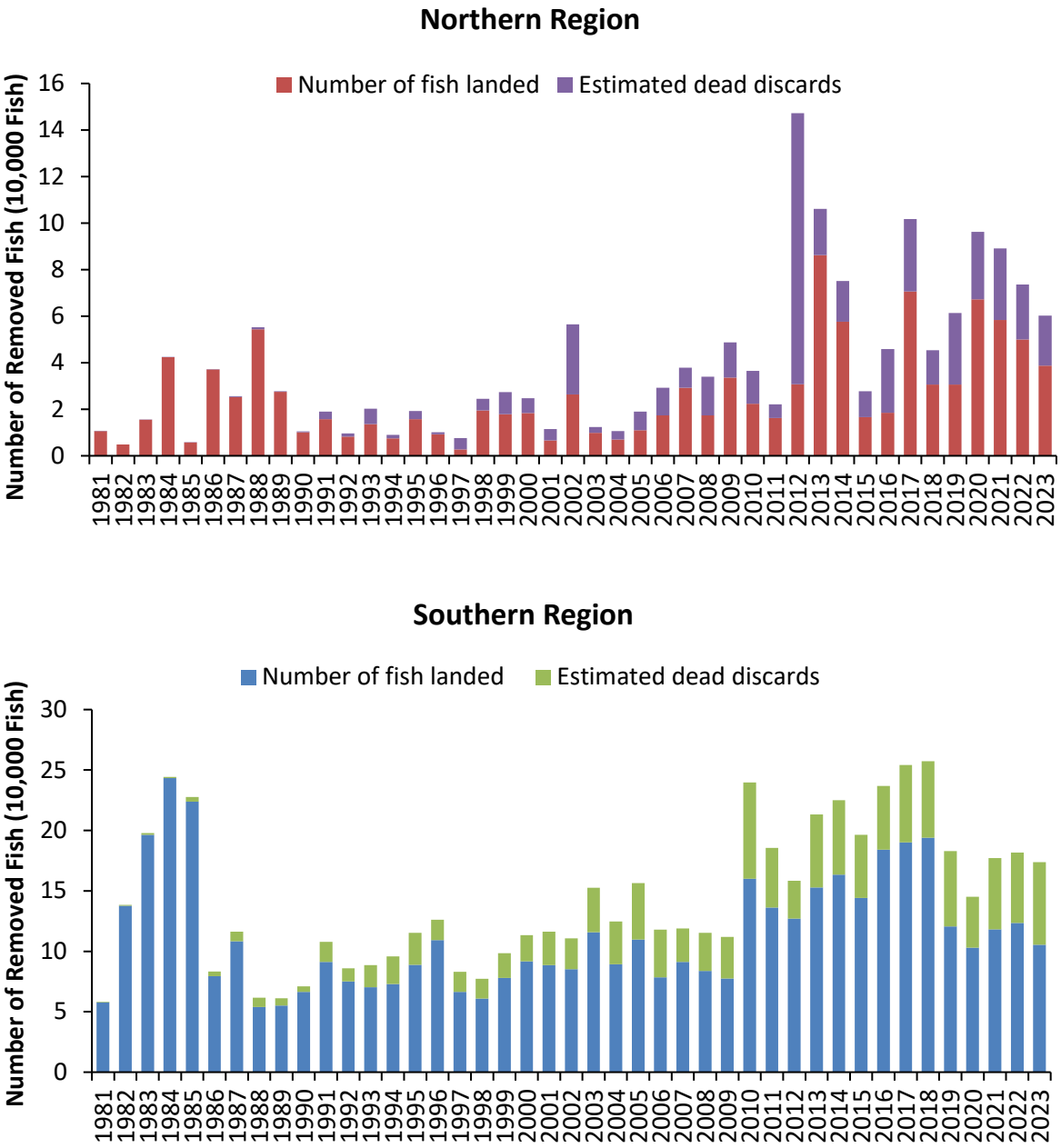

Figure 7. Recreational removals (landings and dead discards) of red drum (numbers) by region from 1981-2023. Dead discards are estimated by applying an 8% discard mortality rate to alive releases. See Tables 5 & 6 for values and data sources.

XI. Tables

Table 1. Red drum regulations for 2023. The states of New Jersey through Florida are required to meet the requirements in the FMP; states north of New Jersey are encouraged to follow the regulations. All size limits are total length.

State	Recreational	Commercial
NJ	18" - 27", 1 fish	18" - 27", 1 fish
DE	20" - 27", 5 fish	20" - 27", 5 fish
MD	18" - 27", 1 fish	18" - 25", 5 fish
PRFC	18" - 25", 5 fish	18" - 25", 5 fish
VA	18" - 26", 3 fish	18" - 25", 5 fish
NC	18" - 27", 1 fish	18" - 27"; 250,000 lbs harvest cap with overage payback (150,000 lbs Sept 1- April 30; 100,000 lbs May 1-Aug 31); harvest of red drum allowed with 7 fish daily trip limit; daily landed catch of flounder, bluefish, black drum or striped mullet must exceed daily catch of drum; small mesh (<5" stretched mesh) gill nets attendance requirement May 1 - November 30. Fishing year: September 1 – August 31.
SC	15" - 23", 2 fish per person per day bag limit and 6 fish per boat per day boat limit	Gamefish Only
GA	14" - 23", 5 fish	Gamefish Only
FL	18" - 27"; Northeast Region – 1 fish per person per day, 4 fish vessel limit; Indian River Lagoon Region – 0 fish per person per day, 0 vessel limit; Southeast Region – 1 fish per person per day, 2 fish vessel limit (effective September 1, 2022).	Sale of native fish prohibited

Table 2. Overview of each state's fishery independent surveys.

State	Fishery Independent Monitoring Details
New Jersey	Five annual nearshore trawl surveys conducted since 1988, in January/February, April, June, August, and October. Length and weight data, and catch per unit effort (CPUE) in number of fish per tow and biomass per tow recorded for all species.
Delaware	30-ft bottom trawl survey and 16-ft bottom trawl survey. Neither survey has ever captured red drum.
North Carolina	Seine survey since 1991 produces age-0 abundance index. Gill net survey in Pamlico Sound since 2001 characterizes size and age distribution, produces abundance index, improves bycatch estimates, and studies habitat usage. Longline survey since 2007 produces adult index of abundance and tags fish.
South Carolina	Estuarine trammel net survey for subadults. Electrofishing survey in low salinity estuarine areas for juveniles/subadults. Inshore and coastal bottom longline survey for biological data and adult abundance index. Genetic sub-sampling and tagging conducted during these three surveys.
Georgia	Estuarine trammel net survey for subadult biological data and abundance index. Estuarine gill net survey for young-of-year (YOY) biological data and abundance index. Bottom longline survey for adult biological data and abundance index.
Florida	Seine surveys characterizing young-of-year (YOY) (<40 mm standard length) and sub-adult (>299 mm) abundance along the northeast (NE) and southeast (SE) Florida coasts.

Table 3. Commercial landings (pounds) of red drum by state, 2014-2023. (Source: personal communication with ACCSP, for years prior to 2022 and state compliance reports for 2022, except as noted below.) Note that SC, GA, and FL do not have commercial red drum fisheries, and years with incidental landings are included in the total.

Year	NJ to PRFC	VA	NC	Total
2014	353	14,733	90,647	105,732
2015	421	814	80,282	81,516
2016	197	1,898	77,833	79,927
2017	644	6,971	186,411	194,032
2018	C	885	144,464	145,500
2019	32	1,650	56,393	58,107
2020	104	7,989	165,670	173,867
2021	217	19,584	200,825	220,843
2022	57	17,411	175,029	192,554
2023	C	16,899	186,414	204,500

*C indicates confidential landings, and totals have been rounded to protect confidentiality.

Table 4. Recreational landings (pounds) of red drum by state, 2014-2023. (Source: personal communication with MRIP for data prior to 2023; state compliance reports for 2023)

Year	NJ	DE	MD	VA	NC	Northern Region Total
2014				979,388	1,674,595	2,653,983
2015				98,329	567,730	666,059
2016				45,451	633,496	678,947
2017			6,782	1,628,692	1,475,852	3,111,326
2018				31,566	1,452,358	1,483,924
2019	4,107		2,113	470,940	436,219	913,379
2020		1,544	115,181	610,001	1,758,789	2,485,515
2021			5,441	1,123,953	1,479,550	2,608,944
2022				762,729	1,615,108	2,377,837
2023			53,253	588,763	1,120,661	1,762,677

Year		SC	GA	FL	Southern Region Total
2014		921,971	387,367	4,582,561	5,891,899
2015		656,747	394,787	3,949,000	5,000,534
2016		536,550	586,235	5,694,370	6,817,155
2017		1,048,249	826,857	4,470,905	6,346,011
2018		643,213	1,186,306	4,829,344	6,658,863
2019		862,124	630,294	2,372,773	3,865,191
2020		671,004	535,674	2,135,395	3,342,073
2021		441,191	506,962	2,473,995	3,422,148
2022		584,289	1,081,410	1,605,556	3,271,255
2023		688,722	826,719	1,527,754	3,043,195

Table 5. Recreational landings (numbers) of red drum by state, 2014-2023. (Source: personal communication with MRIP for data prior to 2023; state compliance reports for 2023)

Year	NJ	DE	MD	VA	NC	Northern Total
2014				251,501	324,303	575,804
2015				22,102	143,876	165,978
2016				15,866	169,195	185,061
2017			4,943	347,145	353,716	705,804
2018				6,334	299,577	305,911
2019	1,331		1,258	205,824	97,186	305,599
2020		493	44,975	214,069	413,419	672,956
2021			1,415	256,281	325,662	583,358
2022				163,962	336,280	500,242
2023			17,896	137,063	232,133	387,092

Year		SC	GA	FL	Southern Total
2014		393,424	212,193	1,027,980	1,633,597
2015		258,493	201,049	981,685	1,441,227
2016		241,224	289,928	1,309,505	1,840,657
2017		455,887	467,522	978,520	1,901,929
2018		262,725	606,836	1,069,604	1,939,165
2019		333,315	271,970	599,348	1,204,633
2020		239,874	230,026	560,382	1,030,282
2021		210,454	261,488	710,091	1,182,033
2022		219,659	607,512	406,391	1,233,562
2023		280,527	366,498	407,618	1,054,643

Table 6. Recreational alive releases (numbers) of red drum by state, 2014-2023. (Source: personal communication with MRIP for data prior to 2023; state compliance reports for 2023)

Year	NJ	DE	MD	VA	NC	Northern Region Total	Northern Region Dead Discards
2014		264	659	1,108,646	1,086,967	2,196,536	175,723
2015			1,456	78,590	1,308,072	1,388,118	111,049
2016		2,598	47,908	164,575	3,203,452	3,418,533	273,483
2017			14,148	1,722,618	2,165,656	3,902,422	312,194
2018	4,715		21,384	85,338	1,729,260	1,840,697	147,256
2019		474	5,740	865,957	2,976,601	3,848,772	307,902
2020			217,710	716,277	2,686,150	3,620,137	289,611
2021		1,147	22,218	1,272,609	2,545,371	3,841,345	307,308
2022		2,116	18,010	770,731	2,160,742	2,951,599	236,128
2023	881	595	98,500	1,145,885	1,439,370	2,684,350	214,748

Year		SC	GA	FL	Southern Region Total	Southern Region Dead Discards
2014		1,874,809	750,619	5,074,602	7,700,030	616,002
2015		1,432,754	961,277	4,132,461	6,526,492	522,119
2016		1,266,931	601,153	4,734,303	6,602,387	528,191
2017		2,094,199	1,176,524	4,727,411	7,998,134	639,851
2018		1,493,803	1,045,570	5,375,011	7,914,384	633,151
2019		2,911,653	1,206,707	3,688,884	7,807,244	624,580
2020		1,705,054	393,368	3,154,500	5,252,922	420,234
2021		1,894,088	794,030	4,689,059	7,377,177	590,174
2022		1,289,714	1,814,251	4,188,940	7,292,905	583,432
2023		2,320,184	1,450,988	4,760,870	8,532,042	682,563