Atlantic States Marine Fisheries Commission

Sciaenids Management Board

August 3, 2021
3:15 – 5:15 p.m.
Webinar

Draft Agenda

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

1.	Welcome/Call to Order *(L. Fegley)*	3:15 p.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from March 2021	3:15 p.m.
3.	Public Comment	3:20 p.m.
4.	Review Traffic Light Analysis (TLA) for Spot and Atlantic Croaker and Technical Committee Recommendations *(D. Franco/H. Rickabaugh)*	3:30 p.m.
5.	Review Technical Committee Recommendations for Black Drum TLA and Benchmark Stock Assessment (*H. Rickabaugh*) **Action**	4:15 p.m.
6.	Consider Atlantic Croaker and Red Drum Fishery Management Plan Reviews and State Compliance for 2020 Fishing Year (*S. Lewis*) **Action** • Consider State Implementation Plan from Florida for its Commercial Atlantic Croaker Fishery	4:45 p.m.
7.	Update on Red Drum Modeling Process and 2022 Simulation Stock Assessment *(J. Kipp)*	5:00 p.m.
8.	Other Business/Adjourn	5:10 p.m.

The meeting will be held via webinar, click here for details.

MEETING OVERVIEW

Sciaenids Management Board
Meeting Tuesday, August 3, 2021
3:15 – 5:15 p.m.
Webinar

Chair: Lynn Fegley (MD) Assumed Chairmanship: 02/20	Technical Committee Chairs: Black Drum: Harry Rickabaugh (MD) Atlantic Croaker: Dawn Franco (GA) Red Drum: Lee Paramore (NC) Spot: Harry Rickabaugh (MD)	Law Enforcement Committee Representative: Capt. Chris Hodge (GA)
Vice Chair: Vacant	Advisory Panel Chair: Craig Freeman (VA)	Previous Board Meeting: March 18, 2021
Voting Members: NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS (10 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from March 2021

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 Traffic Light Analysis (TLA) for Spot and Atlantic Croaker and Technical Committee Recommendations (3:30-4:15 p.m.)

Background

- The Traffic Light Analyses is updated annually for both spot and Atlantic croaker to assess changes to the population in non-benchmark stock assessment years.
- The 2020 TLA triggered management action at the level of moderate concern, the Spot and Croaker Technical Committees ran the TLA for each species with the additional year's data. (**Briefing Materials**).
- Due to the COVID-19 pandemic, there were interruptions to surveys used in the TLA. The TC meet to review missing data and determine the impacts on the annual TLA process. (**Briefing Materials**)

Presentations

- Review of 2021 Traffic Light Analyses of the 2020 fishing year for Atlantic Croaker and Spot and missing data considerations by D. Franco and H. Rickabaugh.

5. Review Technical Committee Recommendations for the Black Drum Traffic Light Approach and Benchmark Stock Assessment (4:15-4:45 p.m.) Action

Background

- During the 2020 FMP Review of the 2019 fishing year, the Plan Review Team (PRT) recommended the consideration of an interim method for monitoring black drum in the absence of an updated stock assessment.
- The Technical Committee met in April to review the use of a Traffic Light Approach for black drum, and consider whether the development of a TLA or pursing an updated Benchmark Stock Assessment was more appropriate for the stock. (**Briefing Materials**)

Presentations

- Overview of the TC Discussion and recommendations by H. Rickabaugh.

Board actions for consideration at this meeting

- Initiate the formation of a Stock Assessment Subcommittee to begin the Benchmark Stock Assessment Process

6. Consider Approval of 2020 Fishery Management Plan Reviews and State Compliance for Red Drum and Atlantic Croaker, (4:45-4:15 p.m.) Action

Background

- Red Drum state compliance reports are due on July 1. The Red Drum Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. New Jersey and Delaware have requested continued *de minimis* status. **(Supplemental 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 and Delaware requested *de minimis* status for both their recreational and commercial fisheries, and South Carolina and Georgia requested *de minimis* status for their commercial fisheries. **(Supplemental Materials)**
- Due to the management actions triggered by Addendum III in 2020, states that were non-*de minimis* were required to submit state implementation plans for Board approval. Florida has not applied for *de minimis* status for 2022 during the compliance review process, and has submitted a state implementation plan for their commercial croaker fishery for Atlantic croaker. **(Supplemental Materials)**

Presentations

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

Board actions for consideration at this meeting

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

7. Update on Red Drum Modeling Process and 2022 Simulation Stock Assessment (5:00-5:15 p.m.)
Background • In 2020, the Board initiated a simulation modeling process so the Red Drum Stock Assessment Subcommittee (SAS) may determine the most appropriate assessment strategy for red drum. An update will be provided into the progress of the simulation modeling process.
Presentations • Stock assessment update by J. Kipp

8. Other Business/Adjourn

Sciaenids Management Board

Activity level: High

Committee Overlap Score: Moderate (American Eel TC, Bluefish TC, Menhaden TC, Weakfish TC)

Committee Task List

- Red Drum SAS – Conduct Red Drum Simulation Assessment
- Spot TC – Review State Proposals for Regulation Changes
- Atlantic Croaker TC – Review State Proposals for Regulation Changes
- Atlantic Croaker TC – July 1: Compliance Reports Due
- Red Drum TC – July 1: Compliance Reports Due
- Atlantic Croaker TC – Conduct 2021 Traffic Light Approach analysis for Annual Meeting
- Spot TC – Conduct 2021 Traffic Light Approach analysis for Annual Meeting
- Black Drum TC – August 1: Compliance Reports Due
- Spotted Seatrout PRT – September 1: Compliance Reports Due
- Spot PRT – November 1: Compliance Reports Due

TC Members:

Atlantic Croaker: Dawn Franco (GA, Chair), Kristen Anstead (ASMFC), Savannah Lewis (ASMFC), Stacy VanMorter (NJ), Michael Greco (DE), Harry Rickabaugh (MD), Somers Smott (VA, Vice Chair), Morgan Paris (NC), Chris McDonough (SC), Joseph Munyandorero (FL)

Black Drum: Harry Rickabaugh (MD, Chair), Jeff Kipp (ASMFC), Savannah Lewis (ASMFC), Craig Tomlin (NJ), Jordan Zimmerman (DE), Ethan Simpson (VA), Chris Stewart (NC), Chris McDonough (SC), Ryan Harrell (GA), Shanae Allen (FL)

Red Drum: Lee Paramore (NC, Chair), Jeff Kipp (ASMFC), Savannah Lewis (ASMFC), Alissa Wilson (NJ), Michael Greco (DE), Robert Bourdon (MD), Ethan Simpson (VA, Vice Chair), Joey Ballenger (SC), Chris Kalinowsky (GA), Roger Pugliese (SAFMC)

Spot: Harry Rickabaugh (MD, Chair), Jeff Kipp (ASMFC), Savannah Lewis (ASMFC), Stacy VanMorter (NJ), Michael Greco (DE), Somers Smott (VA), Morgan Paris (NC), Chris McDonough (SC), BJ Hilton (GA), Joseph Munyandorero (FL)

Spotted Seatrout (PRT): Savannah Lewis (ASMFC), Douglas Lipton (MD), Tracey Bauer (NC), Joey Ballenger (SC), Chris Kalinowsky (GA)

SAS Members:

Red Drum: Joey Ballenger (SC, Chair), Jeff Kipp (ASMFC), Michael Schmidtke (ASMFC), Angela Giuliano (MD), Lee Paramore (NC), Thom Teears (NC), Jared Flowers (GA), Chris Swanson (FL)

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

SCIAENIDS MANAGEMENT BOARD

Webinar
March 18, 2021

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

Draft Proceedings of the Sciaenids Management Board
March 2021

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March 2021

ATTENDANCE

Board Members

Joe Cimino, NJ (AA)
Tom Fote, NJ (GA)
Adam Nowalsky, NJ, proxy for Asm. Houghtaling (LA)
John Clark, DE, proxy for D. Saveikis (AA)
Roy Miller, DE (GA)
Lynn Fegley, MD, proxy for B. Anderson (AA)
David Sikorski, MD, proxy for Del. Stein (LA)
Pat Geer, VA, proxy for S. Bowman (AA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Malcolm Rhodes, SC (GA)
Doug Haymans, GA (AA)
Spud Woodward, GA (GA)
Jim Estes, FL, proxy for J. McCawley (AA)
Marty Gary, PRFC
Jack McGovern, NMFS

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

Ex-Officio Members

Dawn Franco, Atl. Croaker Technical Committee Chair
Angela Giuliano, Cobia Technical Committee Chair
Lee Paramore, Red Drum Technical Committee Chair
Harry Rickabaugh, Black Drum & Spot Technical Committee Chair

Staff

Robert Beal
Toni Kerns
Tina Berger
Kristen Anstead
Pat Campfield
Emilie Franke
Chris Jacobs
Jeff Kipp
Savannah Lewis
Mike Rinaldi

Guests

Taylor Ailtmar, CBF
Erika Burgess, FL FWC
Heather Corbett, NJ DEP
Timothy Ellis, NC DENR
Corrin Flora, NC DENR
Craig Freeman
Michael Greco, DE DFW
Wallace Jenkins, SC DNR
Wilson Laney
Shanna Madsen, VMRC
Genine McClair, MD DNR
Chris McDonough, SC DNR
Chris Moore, CBF
Morgan Paris, NC DENR
Somers Smott, VMRC
Stacy VanMorte, NJ DEP
Dan Zapf, NC DENR
Jill Ramsey, VMRC

The Sciaenids Management Board of the Atlantic States Marine Fisheries Commission convened via webinar; Thursday, March 18, 2021, and was called to order at 1:00 p.m. by Chair Lynn Fegley.

CALL TO ORDER

CHAIR LYNN FEGLEY: Welcome everybody to the newly formed Sciaenids Management Board. My one wish is that nobody ever makes me spell it. My name is Lynn Fegley; I represent the state of Maryland, and I'm serving as your Chair. Today we have a couple hours to get through our agenda.

APPROVAL OF AGENDA

CHAIR FEGLEY: We've got a couple of action items that we're going to be looking for motions on, so just get yourselves ready for that. I'm looking forward to good discussion. But first, the first order of business is there any opposition to the agenda as it stands? If you have, please raise your hand if you desire any changes or edits to the agenda.

Seeing none, we will consider the agenda approved by consensus.

APPROVAL OF PROCEEDINGS

CHAIR FEGLEY: The next order of business is the approval of the proceedings from October, 2020 that were in the meeting materials. I will say there was one minor wording change on Page 17, and it was sort of a funny typo. It's been corrected. Is there anybody else who would like to see changes or edits to the proceedings?

If you would like changes or edits, please raise your hand. Okay, seeing none, we'll just consider those approved by consent.

PUBLIC COMMENT

CHAIR FEGLEY: Moving on, the next order of business is public comment. Do we have anybody in the public who would like to provide comment to the Board at this time? Please raise your hand if you do.

MS. KERNS: Lynn, I just want to tell everybody how to raise their hand, just in case folks haven't been on our webinar before. If you click on the hand icon that is below the red arrow and the microphone, your hand is raised when the red arrow is pointing downward. If it is the green arrow pointing up, your hand is not raised.

CHAIR FEGLEY: Great, thank you, Toni, for that. I'll just ask one more time, is there anybody from the public who would like to provide comment to the Board?

CONSIDER SPOT FISHERY MANAGEMENT PLAN REVIEW AND STATE COMPLIANCE FOR 2019

CHAIR FEGLEY: Okay, seeing none, we will just roll on along, and we are now going to consider the Fishery Management Plan Review and State Compliance for the 2019 fishing year for spot. With that, I will turn it over to Savannah Lewis.

MS. SAVANNAH LEWIS: Thank you, Madam Chair. Good afternoon everyone, today I will be going over the Spot FMP Review for the 2019 fishing year, as well as *de minimis* requests for the 2021 spot fishery. The PRT met in December, 2020 to review state compliance reports and the FMP Review. This graph shows total landings, with commercial landings represented by the blue bars, and recreational landings represented by the black line. Years on the X axis with harvest in millions of pounds on the Y. Total coastwide spot landings in 2019 were estimated at 6.4 million pounds.

This represents an increase from 2018, but is the third lowest total harvest on record. The commercial and recreational fisheries harvested 30 percent and 70 percent of the total respectively. Coastwide commercial landings have varied, but declined in recent years. In 2019, 1.7 million pounds were harvested

commercially, with the majority from Virginia and North Carolina.

This graph shows recreational harvest as orange bars, with releases shown by the black line. Years on the X axis, and catch in millions of fish on the Y. Recreational harvest has fluctuated throughout the time series from 12.8 million fish, to 54.4 million fish, 2018 had the lowest harvest in the time series, at 12.8 million fish, and 2019 saw an increase of 2.2 million fish, for a total of 15 million fish, or 4.7 million pounds.

Anglers in Virginia and North Carolina harvested the majority of the recreational spot. The estimated number of spot released in 2019 was 11.5 million fish, which is a significant increase from recent trends. In 2019, the harvest composite for spot triggered at the moderate response level for both the mid and South Atlantic groups for two out of the last three years.

Here you're seeing two figures that represent the traffic light approach that was presented at the annual meeting in October. The mean proportion of red from 2017 to 2019 in the Mid-Atlantic was 40.4 percent, and the mean in the South Atlantic was 35.6 percent. Due to a delay in the recalibration of the CHESMMAP Survey, which is used in the annual TLA reviews, no data points were available for spot in 2019 for abundance indices for the Mid-Atlantic region.

However, even without the data points for 2019, the Mid-Atlantic Adult Composite Index has been above the 30 percent threshold since 2011. The South Atlantic Adult Composite Characteristics did not exceed the 30 percent level in 2019, or in two of the last three consecutive years. Overall, there is a continued trend of disconnect between the harvest and abundance indices, with the harvest metric exhibiting a decreasing trend, while the abundance metric had an increasing trend, specifically in the South Atlantic.

However, because harvest indices for both regions and abundance indices for the Mid-Atlantic were above 30 percent in two of the last three years, management response as outlined in Addendum III was enacted at the annual meeting. Four states have applied for *de minimis*. New Jersey and Georgia applied for *de minimis* status through the annual state compliance report process.

Delaware and PRFC have applied through the state implementation plan process. Just a reminder about *de minimis:* States may apply for *de minimis* status if, for the preceding three years for which data are available, their average combined commercial and recreational landings by weight constitute less than 1 percent of the average combined coastwide commercial and recreational landings for the same period. All four states meet this requirement. Annually, state compliance reports for spot are due on November 1st. The PRT found that all states have implemented the requirements of the FMP. They recommend approving state compliance reports as well as *de minimis* requests for New Jersey, Georgia, Delaware, and PRFC. The PRT would also like the Board to consider reviewing the *de minimis* status for spot by splitting out commercial and recreational *de minimis* to mirror croaker.

This would also allow flexibility for states with their management. Additional research and monitoring recommendations can be found in the FMP Review document. With that, I'm happy to take any questions that the Board may have about the spot FMP Review, state compliance reports or *de minimis* requests.

CHAIR FEGLEY: Thank you, Savannah. Are there any questions at this time for Savannah, please raise your hands?

MS. KERNS: Lynn, you've got a hand.

MS. FEGLEY: I see Chris Batsavage, so Chris Batsavage. Go ahead, please.

MR. CHRIS BATSAVAGE: A question for Savannah. Would changing the *de minimis* requirements for spot, where it's separate for commercial and recreational take an addendum to the plan, or is there another way to do that?

MS. LEWIS: Yes, great question, Chris. That would require an addendum to the plan.

CHAIR FEGLEY: Okay, thanks, Savannah. Just so that I'm clear. Since that requires an addendum, is there is a motion to approve the state compliance reports and request for *de minimis?* Does that automatically, do we need a separate motion then to direct to split *de minimis* or to initiate an addendum?

MS. KERNS: Savannah, do you want some help with that one?

MS. LEWIS: Yes, go ahead, Toni, because I haven't been through the process yet.

MS. KERNS: No problem. Lynn, any recommendations that are in the FMP Review from the PRT, the Board would actually have to take action to implement any of those. They are not automatically approved when you accept the FMP Review and the *de minimis* requests. You would have to take a separate action to initiate them.

For example, if the PRT suggested the Board task, the TC to do something, the Board would still need to task the TC to do that whatever thing. In this case, yes, you would initiate an amendment. Doug Haymans also had his hand up, I don't know if you can see him or not, so I just wanted to make sure you knew that.

MS. FEGLEY: Thank you very much, and I see it, Doug Haymans, go ahead.

MR. DOUG HAYMANS: I would be in favor of making a motion to accept the plan review, but any change to *de minimis* at this point I think we need to hold, because as many folks on the call know, the Policy Board rather, will be having a discussion, hopefully in the near future about *de minimis* across the board.

I think to make a change right now to *de minimis* , would be in error, as they may wind up changing it again based on the decisions of the Policy Board. For instance, I'm in favor of keeping recreational and commercial together, and that may be something that comes up in the Policy. I don't think I would be in favor of a motion to split that apart or even to start an addendum at this point, until the Policy Board has had an opportunity to weigh in.

CHAIR FEGLEY: Yes, thank you for that, Doug; that is a really good point. Okay, so Roy Miller, I see your hand is up.

MR. ROY W. MILLER: Thank you, Lynn. I just wanted to agree with what Doug said, and the reason it's of interest to us is Delaware and New Jersey are *de minimis* states, with regard to spot. At times we have a fairly abundant recreational spot fishery in lower Delaware Bay. Common sense says that a limit of 50 is just kind of a common-sense measure, even for *de minimis* states, to prevent wanton waste, to prevent localized depletion, that kind of thing.

I agree, perhaps the best place to deal with this is via the Policy Board. But, I'm just sort of throwing that out there as something that we need to think about, and use a common-sense approach when it comes to setting *de minimis* measures, or setting minimum regulatory measures for *de minimis* states. Thank you.

CHAIR FEGLEY: Yes, good point. Tom Fote, I see your hand.

THOMAS P. FOTE: Well, I thought he made the motion, I was going to second it, to approve the plan, because we got a report.

CHAIR FEGLEY: Yes, I don't think we have a motion yet. Here is what I would like to do. I would like to, and Marty Gary, your hand just went up. Let's go to you before I say more.

MR. MARTIN GARY: I was prepared also to make a motion to accept the *de minimis* request, the FMP review, et cetera. I'm not sure if we're quite there yet, but I am prepared to make that. But I did want to, since we kind of tangent into this discussion about rationale for *de minimis.* I wanted to give the Board members another wrinkle that we've experienced at PRFC.

For spot, we are right in the middle of a geographic zone where they should be, and our population of spot are, at least that is available to our fishermen, has declined dramatically, and hence our eligibility for the *de minimis* status that we requested. But we have an interesting scenario, and we're kind of bound by the commercial and the recreational being hinged together for *de minimis*.

Our preference would be, if we had the option to have *de minimis* for commercial, but not for recreational, because our neighboring jurisdictions of Virginia and Maryland, which we would be out of alignment with them from a regulatory perspective. There are nuances I won't go into, that cause problems for that. I just wanted to say for the record that if PRFCs *de minimis* is accepted, we may, and very, very, likely implement more restrictive measures for the recreational fishery, because we really feel like we need to. But I want to make sure folks on the Board knew that, and if we get to the point, we're prepared to make a motion, I'll certainly offer one, thank you.

CHAIR FEGLEY: Okay, thank you, Marty. Doug Haymans, your hand is still up. I assume that's an artifact, or do you have a follow up?

MR. HAYMANS: Artifact, apology.

CHAIR FEGLEY: No worries. Okay, so here is what I would like to do. I would like to just address these issues one at a time. What I want to know is if there is somebody who thinks we should initiate an addendum for this *de minimis* issue. If somebody would like to initiate, make a motion to initiate an addendum, please raise your hand. If nobody comes forward, then we'll just assume we're going to call that issue resolved, and wait to handle that at a later date. Is there anybody out there, any Board member who would like to make a motion about *de minimis?*

Okay, I am seeing no hands up, so I think I do believe that is a wise choice by the Board, given what Doug Haymans said, that this issue is going to be considered holistically by the Commission, and to wait for that outcome I think is a good move. The next thing is, I would be looking for a motion to accept the FMP Review, state compliance and *de minimis* requests.

MR. GARY: Madam Chair, this is Marty, I would be happy to make that motion if you would like.

CHAIR FEGLEY: Thank you so much, Marty Gary, go ahead.

MR. GARY: Motion to approve the Spot FMP Review, state compliance reports, and *de minimis* requests for the 2021 recreational and commercial spot fishery for New Jersey, Delaware, Georgia, and the Potomac River Fisheries Commission.

CHAIR FEGLEY: Excellent, thank you, Marty, and I saw Jim Estes hand go up first, was that a second?

MR. JIM ESTES: Yes, Ma'am, it was.

CHAIR FEGLEY: Thank you, Mr. Estes.

MS. KERNS: Lynn, if it's all right. I just want to perfect this motion if I can. Savannah, this is the 2020 or the 2019 spot FMP review?

MS. LEWIS: The 2019 fishing year.

MS. KERNS: Yes, great. Could we just put that in the motion, so we're recording which one it is? Maya, thank you so much.

CHAIR FEGLEY: Good call, Toni. Okay, forgive me, I have to move a couple things around on my screen, so that I can read the motion into the record, which I will do.

MS. KERNS: Maya, the *de minimis* requests were for the 2021 fishing year. We just need to add 2019 to the beginning, so it would be Move to approve the 2019 fishing year spot FMP review. Sorry, Lynn.

CHAIR FEGLEY: No, that's fine. I think that looks good, yes thank you, Maya. Okay, so the motion is to approve the 2019 fishing year spot fishery management plan review, state compliance reports and *de minimis* request for the 2021 recreational and commercial spot fishery for New Jersey, Georgia, Delaware, and for the Potomac River Fisheries Commission. **I'm just going to ask, is there any opposition to this motion? If yes, please raise your hand. Okay, seeing none, this motion is approved by consent.**

Thank you very much for that. We are on time and under budget.

CONSIDER APPROVAL OF THE STATE IMPLEMENTATION PLANS FOR SPOT AND ATLANTIC CROAKER ADDENDUM III MANAGEMENT

CHAIR FEGLEY: The next item on the agenda is to consider state implementation plans for spot and croaker, Addendum III management we all know, due to the traffic light results, we have to implement some management for these species. Compliance reports were due back in February, February 15. With that I will turn it back over to Savannah, to go over the implementation plans.

MS. LEWIS: I'm going to give you a quick overview for the presentation today. First, I'm going to give a quick recap of the background for this discussion, then we will review a *de minimis* request before reviewing state implementation plans and recommendations from the Technical Committees.

The traffic light approach, or TLA reports in 2020 indicated that both spot and Atlantic croaker exceeded the threshold for moderate concern, or 30 percent of the proportion is red. Addendum III for each species outlines the management response needed if this threshold was exceeded. Only non-*de minimis* states are required to make changes at the 30 percent level. States must have a 50 fish bag limit for their recreational fishery, and make a 1 percent reduction to the 10-year average of commercial harvest.

TECHNICAL COMMITTEE REPORT

MS. LEWIS: Measures must be in place for at least three years for Atlantic croaker, and two years for spot. States with more restrictive regulations are encouraged to keep them in place. The Technical Committees met to review state implementation plans, and determine if the methods were quantifiable, and met the requirements of the Addenda. PRFC, the Potomac River Fisheries Commission, has requested *de minimis* for their Atlantic croaker commercial fishery.

As a reminder, states may apply for the *de minimis* status if the proceeding three years for which data is available, their average commercial or recreational landings by weight constitute less than 1 percent of the average coastwide commercial or recreational landings for the same period. PRFC is above the 1 percent threshold, but have experienced a 99 percent decline in commercial landings from 2017 to 2019 with landings decreasing from tens of thousands of pounds to hundreds of pounds. The PRT discussed supporting the recommendation of *de minimis* for PRFC, but stressed that *de minimis* for states above the 1 percent limit are temporary for the year, and will be evaluated annually through the state compliance report process. During the approval process for the Atlantic croaker FMP review at

the annual meeting, Florida was given temporary *de minimis* status for 2021, to ensure that their croaker fishery was actually growing, or if it was just experiencing an outlier year.

PRFC is requesting *de minimis* to allow time to evaluate their recent trends in landings as well. For the Atlantic croaker implementation plans, all non *de minimis* states were required to implement a 50-fish recreational bag limit, and regulations projected to produce a 1 percent reduction to the 10-year average commercial state landings.

State implementation plans were received from three states for Atlantic croaker; Virginia, North Carolina, and Florida. All states plan on implementing the 50-fish recreational bag limit. North Carolina and Virginia have proposed commercial season modifications, to meet the required reduction.

Florida currently has *de minimis* status for the commercial fishery, and is therefore not required to implement commercial regulation changes. Virginia and North Carolina use similar methodologies to calculate season modifications based on daily or weekly average catch rates, then removed enough days or weeks to meet the required reduction.

All states use landings from both state and federal waters to calculate their reductions. Virginia will have a two-week closure that is estimated to greatly exceed the 1 percent reduction with an estimated 12 percent reduction in commercial harvest. North Carolina's 16-day closure is estimated to exceed the needed reduction by a thousand pounds.

All states are expected to implement regulations this year. Response, all non-*de minimis* states are required to implement a 50-fish recreational bag limit, and a reduction that would reduce the 10-year average commercial state landings by 1 percent. State implementation plans were received from four states for spot, Maryland, Virginia, North Carolina and Florida.

All states plan on implementing the 50 fish recreational bag limit, and all states have proposed commercial season modifications to meet the required reduction, with the exception of Florida. Maryland, Virginia, and North Carolina calculated season modifications based on daily or weekly average catch rates, then removed enough days or weeks to meet the required reduction.

Florida, which due to its highly variable seasonality for commercial harvest, elected to have a vessel limit that would meet the required reduction. They looked at annual commercial landings, and then selected a vessel limit that would produce an average annual 1 percent reduction. All states use landings from both state and federal waters to calculate their reductions.

Maryland is proposing a season from April 10 to November 24, Virginia is proposing a season from April 15 to December 8, and North Carolina is proposing a 116-day closure from December 10 to April 4. Florida will have a 2,200-pound vessel limit on spot harvested in state waters. All states will meet or exceed the required 1 percent reduction of the 10-year average commercial harvest. This table is a summary table that if approved, the current regulations for Atlantic croaker for all states with a declared interest. The bold wording indicates where changes are being made, including their *de minimis* request. The asterisks mean that they have additional for-hire language addressing the live-bait bag limit.

This table is a summary table for spot. If approved it's showing all current regulations for spot. For all states with a declared interest, the bold wording indicates where changes are being made, including the *de minimis* requests that were just approved. The asterisk means that they have additional charter language for live bait.

The outcome of the Board approving *de minimis* will impact the regulations. The Plan Review Team for Atlantic croaker supported the 2021 *de minimis* request for PRFC, but only on a temporary status. The Technical Committees had no concerns with the final versions of the state implementation plans, and found the methods to be technically sound.

The commercial Technical Committees recommended the approval of the spot and Atlantic croaker state implementation plans for adjusting state regulations for the recreational and commercial spot and Atlantic croaker fisheries. With that I'm happy to take any questions that the Board may have.

CHAIR FEGLEY: Thank you, Savannah, great job. I just want to editorialize a little bit that I fully understand how difficult it can be to implement regulations for the fisheries that have historically not been regulated, so thank you to everyone, to all the states for their work on this to get this done.

CHAIR FEGLEY: With that, are there any questions for Savannah? I've got Chris Batsavage.

MR. BATSAVAGE: A couple of questions on the Florida implementation plan for the commercial spot fishery, just to better understand Florida state and federal waters fisheries, in terms of any enforcement issues with different regulations in those waters. First question, I guess it's probably to Jim Estes. What are the gears that land spot that are allowed in federal waters that aren't allowed in state waters?

CHAIR FEGLEY: Jim Estes.

MR. ESTES: Chris, a little over 85 percent of the spot that are landed in federal waters are landed in gillnets. Gillnets are not allowed in state waters. Does that answer your question?

MR. BATSAVAGE: Yes, that helps a lot, thanks, and just one follow up question. I understand from the implementation plan the reasons for the differences to reduce chances of regulatory discards, which I think we all try to do with our implementation plans. I definitely support that. But just again, to get a clear understanding. Any landings greater than 2,200 pounds when they occur, which I know isn't often. Are those more likely to come from federal waters, or is it kind of a mix, depending on where the fish are located?

MR. ESTES: May I, Madam Chair?

CHAIR FEGLEY: Go ahead.

MR. ESTES: I think, Chris, I think it's a mix. In fact, if you look at the annual landings, they are really super variable. It's a mix. I think that Erica had given me some statistics, but if I remember right, it's a mix.

MR. BATSAVAGE: Great, thank you, I appreciate that.

CHAIR FEGLEY: Excellent, thank you, Jim. Are there any other questions for Savannah?

MS. KERNS: Lynn, I think that you must not be able to see Doug Haymans. He has his hand up.

CHAIR FEGLEY: Yes, I'm sorry, Doug. Yes, okay I see Doug Haymans. Please, go ahead, I'm sorry.

MR. HAYMANS: That's interesting, because I'm really hard to miss.

CHAIR FEGLEY: You're at the very top, and I was scrolled down, so please, go ahead.

MR. HAYMANS: My apologies, I have two webinars running in my office in case my main computer fails, and that's where the feedback came from. My question simply is regarding the PRFCs request for *de minimis,* and why the PRT suggested temporary in nature. I thought *de minimis* ran until the state was no longer *de minimis,* when they were over the 1 percent.

CHAIR FEGLEY: I think the reason is, because they don't actually technically qualify. They are over the 1 percent threshold, but they are not sure whether or not this is a typical status for their fisheries that are asking for one year. I will send it over to Savannah if I misarticulated any of that, and then I see Marty Gary's hand up.

MS. LEWIS: Okay, Lynn, I'll just tack on to that. *De minimis* is reviewed annually by the PRT. States have to apply for it through their *de minimis* process. If the PRFC, this would be just, and the PRT made it very clear that this would just be for 2021, that if they were to extend it, they would have to meet that 1 percent reduction, or there would have to be another extenuating circumstance for the PRT to consider granting *de minimis.*

CHAIR FEGLEY: Okay, thank you, Savannah, and Marty Gary, do you want to add on to this?

MR. GARY: I think it's been pretty well captured, but thank you, Madam Chair. Our Commission met on March 5th, and our discussion, we were very conflicted as to whether we would go forward and ask for this *de minimis.* But I think it's been captured accurately. Savannah mentioned we've had a precipitous decline in the abundance of these fish in our jurisdiction for several years.

But again, historically we've had great abundance of this species, and we're hopeful that the status will change in a favorable direction. Even though we don't quite meet those criteria, and we're just above that threshold. We're just asking for this one year for 2021, finish this, take another look at it and see where we are, and hopefully we're in a better place and we won't need *de minimis* status. But we are requesting it for this year, and if you need a motion, I would be happy to make that at the appropriate time, Madam Chair.

CHAIR FEGLEY: Okay, thank you, Marty. I see Roy Miller and Pat Geer both have their hands up, but first I want to just crosscheck with Doug Haymans. Is your question answered?

MR. HAYMANS: Yes.

CHAIR FEGLEY: Next, I would like to go to Roy Miller.

MR. MILLER: I would just like to reiterate the point I made with spot, and say I feel the same way about Atlantic croaker, in terms of once we get around to better defining *de minimis* and what the states have to do who are non *de minimis* . Certainly, Atlantic croaker kind of is in the same ballpark as spot, in terms of 50 Atlantic croaker a day seems like an ample amount to allow harvested for recreational purposes. Well, I'm just putting that out there so people understand where I'm coming from for both those species. The reasoning is similar.

CHAIR FEGLEY: Okay, thank you, Roy. Pat Geer.

MR. PAT GEER: I'm ready to make a motion if there is no other discussion.

CHAIR FEGLEY: Yes, I think we are ready to go down that road. Sure, go right ahead.

MR. GEER: Motion to approve the *de minimis* request for the commercial Atlantic croaker fishery for 2021 for PRFC.

CHAIR FEGLEY: Okay, thank you, Pat, and I see Marty Gary has his hand up, that is a second by Mr. Gary. Great, I'm going to go ahead and read this into the record. This is a motion to approve the *de minimis* request for the commercial Atlantic croaker fishery for 2021 for the Potomac River Fisheries Commission.

I guess before I do that, what I really need, I just need to make sure there is no discussion on this motion. Are we good? Okay, with that I'm just going to ask, is there any opposition to this motion? If there is, please raise your hand. Okay, Toni I see no hands, do you?

MS. KERNS: I do not see any hands, and Pat Geer, your microphone is still open.

CHAIR FEGLEY: Okay, this motion is approved by consent. Thank you very much.

CONSIDER FINAL APPROVAL OF STATE IMPLEMENTATION PLANS

CHAIR FEGLEY: Okay, and with that I think what we will be looking for is a motion for the approval of state implementation plans is next. Is there anybody out there who cares to make a motion? Pat Geer, I see your hand.

MR. GEER: I was going to try to do this all-in-one step, but I guess we're going to do it one at a time. A motion to approve the Atlantic croaker state implementation plans for Maryland, Virginia, North Carolina and Florida.

CHAIR FEGLEY: Great, I believe I see a second by Doug Haymans. Great, last chance. Is there anybody who wants to?

MS. LEWIS: Madam Chair, Maryland should be removed from this list.

CHAIR FEGLEY: You are correct, thank you Savannah for catching that. **Last chance, anyone care to discuss? Okay, is there anybody opposed to this motion, which is to approve Atlantic croaker state implementation plans for Virginia, North Carolina, and Florida? Motion by Mr. Geer, second by Mr. Haymans.**

Any opposition? I see no hands, and seeing none, this motion is approved by consent. Okay, thank you very much everyone for that.

CHAIR FEGLEY: We are going to now move away from spot and croaker, and get an update on the red drum modeling process and stock assessment, which I'm actually very interested to hear about, and for that we're going to go over to Jeff Kipp.

MS. LEWIS: Madam Chair, before we move on, we need to approve the spot implementation plans.

CHAIR FEGLEY: Oh, we do. Yes, thank you. With that we're going to back up. Is there a commissioner who would care to make a motion for the spot state implementation plans? Doug Haymans.

MR. HAYMANS: Madam Chair, I move to approve spot state implementation plans for Virginia, North Carolina, and Florida.

CHAIR FEGLEY: Okay, so for that one Maryland should be in there, I believe.

MS. LEWIS: Yes.

CHAIR FEGLEY: Are there any other states that should be in there that are not?

MS. LEWIS: No, Madam Chair, it looks good to go.

CHAIR FEGLEY: Okay, and I see a second by Malcolm Rhodes. Okay, once again last chance, any discussion on this motion? All right, it is a motion to approve the spot state implementation plans for Maryland, Virginia, North Carolina, and Florida. Is there any opposition? Chris Batsavage, I see your hand. Did you have a comment?

MR. BATSAVAGE: Yes, really quick. I can support this motion. I asked the questions about the differences in state and federal waters for Florida, because that's a problematic issue for our state. However, Florida is a different case, where they have different gears allowed in different states, which would improve their enforceability of the different measures, so I can support that, and just wanted to state that on the record. Also, I guess before we go to red drum after we're done with this, I would just have some general questions about implementation, timing and

just kind of nuts-and-bolts things with the addenda. Thanks.

CHAIR FEGLEY: Thank you, Chris. We'll get to those questions. Just before we go to the motion again, is there anybody else who has anything to say about this**? Okay, this is a motion to approve the spot state implementation plans for Maryland, Virginia, North Carolina, and Florida. Motion by Mr. Haymans, second by Dr. Rhodes.**

Is there any opposition to this motion, please raise your hand if so? Okay, I don't believe I see any hands, so this motion passes by consent. Okay, so now I think Chris Batsavage is correct. We really do need to talk about some implementation timelines. Chris, do you want to go ahead and ask the questions that you had? I think Savannah has the state implementation dates in her presentation. I'll turn it over to you, Chris.

MR. BATSAVAGE: I just want to be clear, just so we understand, and anyone listening in understands that with starting in 2021, 2021 would be considered the first full year of implementation when we're counting a minimum of two years for spot, and three years of croaker. Do I understand that correctly?

CHAIR FEGLEY: That is a good question. I'm going to turn that over to Savannah or Toni to get their read. We are certainly, in the state of Maryland, expecting that to be the case. But I'm going to turn it to them.

MS. KERNS: Lynn, I guess the question is, is there anybody that cannot implement their regulations in 2021, in time for their season of 2021. I think, I just want to make sure that that is correct before I say my answer.

CHAIR FEGLEY: Right, and I think if I remember there was one state, and I don't recall which state it was, but it had a late 2021 implementation date. Perhaps that was Florida.

MS. KERNS: I see Jim with his hand up.

CHAIR FEGLEY: Yes, Jim Estes, go ahead.

MR. ESTES: I am fairly confident that we can do it, but it would be late in the year.

MS. KERNS: The reason why I ask, Lynn, is because my assumption is that we need the two years in order to see if the regulations can have an impact on the stock, and that you see those changes in the traffic light. If everybody is able to get those measures in place, then 2021 would be the first year of the two years. Yes, if that makes sense.

CHAIR FEGLEY: I guess with that, I would, and I don't know, Savannah. It looks like the bulk of the states are going to be implemented within their season. I certainly, I'm not actually sure how to approach this, except to ask if any states feels as though they are going to miss enough of their season with this timing, that it would not be a complete reduction. If there is any state that feels that is the case, please raise your hand and let's talk about it. I know, Jim, you just said you're confident you can get it done, so I think you're good. Anybody else? Okay, so I think Maryland, Virginia, North Carolina and Florida, I believe what I'm hearing, Toni, is that this could be considered a full year. That is what I think I'm hearing.

MS. KERNS: That sounds good, because if I'm remembering correctly, the Addendum has implications for if we don't meet the reduction within the first two years, then it tells us what to do next. That is why I ask.

CHAIR FEGLEY: It does, yes it does. Hopefully, this will get us there. Is there anything else we need to do with that, Savannah, Toni, and Chris, does that answer your question?

MR. BATSAVAGE: I just have one follow up question, only because we've been getting questions about that, if I could. It's really quick. I promise not to take too much more time here.

CHAIR FEGLEY: No, go ahead.

MR. BATSAVAGE: Okay, so we have these implementation plans set for two- or three-years periods, you know depending on whether it's spot or croaker. Can a state submit a conservation equivalency proposal during this period of issues such as increased regulatory discards arise from the season closures or bag limits? Are we able to adjust that, as long as whatever we do is conservation ally equivalent with what is outlined in the addenda?

CHAIR FEGLEY: Yes, good question. I'm going to go to staff for that one.

MS. KERNS: I'm reading the provisions in the plan to make sure it doesn't say anything.

MS. LEWIS: I checked earlier, Toni, and I didn't see any mention of conservation equivalency in the Addendum itself.

MS. KERNS: Chris, I think you can from what I'm reading. It doesn't say you can't, and that is really what the plan has to say, is that you can't use conservation equivalency. You should be able to. You are able to.

CHAIR FEGLEY: I'm just going to, Chris, try to restate your problem quickly so that we all understand. What you're saying is that with the regulations that you're proposing, you're not entirely sure what the result of those regulations is going to be on your discards. If those discards become unwieldy or too high, you would apply for a conservation equivalency to adjust that to lower the discards. Is that what you're proposing?

MR. BATSAVAGE: That's correct, Madam Chair, yes, we've never had specific spot and croaker regulations before, so we're definitely going into some unknown territory, as far as management goes. Thanks.

CHAIR FEGLEY: Sure, I think you know that makes sense, this is new territory, and you know certainly the goal here is not to increase regulatory discards or create them. Okay, good. I think we're on the same page there. Are there any other questions about implementation for spot and croaker? Please, raise your hand if you have a question. Okay, so now it looks as though I believe we can move on to red drum, I think.

UPDATE ON RED DRUM MODELING PROCESS AND STOCK ASSESSMENT

MR. JEFF KIPP: Thank you, Madam Chair. I'm Jeff Kipp, I'm the Commission's Assessment Scientist working on red drum, and I'm here to just give a quick update on the current red drum assessment. Just as a quick refresher on the background of this current red drum assessment. It's a little different than our typical benchmark stock assessment for our species.

This is a simulation study, and it says recommended in consultation with the Assessment Science Committee, on how to proceed on assessing red drum. The purpose of this assessment is to evaluate the performance of several candidate assessment approaches, to inform the Technical Committee and the Peer Review Panel's recommendation on the most robust path for a benchmark assessment of red drum, following this simulation assessment.

We're really trying to get a good idea on what the best assessment approach out of several that we're considering is, moving forward for assessing red drum. This is the first update to the Board on this assessment, and since we've started, we've completed two of our major milestones for the assessment.

We had a data workshop back in November, and during that workshop we reviewed the available datasets for red drum, and we set up the simulation models that we're going to be using throughout this assessment. Then we just finished our first assessment workshop during the first week of March.

During that workshop we reviewed the outputs of the simulation models, and spent some time configuring our candidate assessment approaches, that we'll be shifting our focus to and evaluating those candidate assessment approaches for the remainder of this simulation assessment.

Moving forward, the Stock Assessment Subcommittee will be meeting biweekly, to check in on progress. Then we'll be meeting for a final assessment workshop, hopefully in person, but we'll see, later this year to review the performance of the candidate assessment approaches, then SCNR simulated populations.

The assessment is set to be completed and peer reviewed in 2022, at which point we'll present the results of that assessment and peer review to the Board, and then we'll immediately shift focus to the benchmark assessment of red drum, set to be completed in 2024. That concludes my update, and I can take any questions on the red drum simulation assessment.

CHAIR FEGLEY: Excellent, thank you very much, Jeff. Are there any questions for Jeff Kipp? Bill Gorham.

MR. BILL GORHAM: I was reading over the last stock assessment, and it was noting issues of capturing the spawning stock biomass, in part because of regulations. Are there any efforts to look at other sources of data, like angler photos, citations, et cetera to capture the huge schools of drum that are off North Carolina and Virginia?

MR. KIPP: The only data we've reviewed is more feedback on the size composition of the adult red drum that are caught and released in the recreational fishery. We've looked at several things like tag and recapture data, and then also some more citizen science-based efforts, data collection through phone apps during tournaments, and just from the general fishing population, to try and get some information on the size composition of caught and released adult red drum.

Those have been the primary sources. We haven't looked at anything, in terms of fishery independent data. The only sources that are available are the longline surveys that are conducted by the states to capture the spawning red drum. That's what we've looked at to date in this assessment, and then you know we'll continue looking at those sources I mentioned on the length compositions of caught and released red drum during the benchmark assessment that follows this simulation assessment.

MR. GORHAM: Okay, well thank you, it's just looking at the increase, and I have guys here in the shop. Last year alone, whenever it blows southwest, you know they're catching a couple dozen of these large fish, and then turn around and tell them, you know looking at the assessment that we're never sure of the size of those fish, or those fish are even there. I feel it's troubling, and any way that we can better accurately assess those fish being out there. That's it for the eco-based system, those schools getting bigger and bigger play a role in other fisheries as well.

CHAIR FEGLEY: Are there any other questions for Jeff? I'm sorry, I was not unmuted. Thank you, Jeff.

OTHER BUSINESS

CHAIR FEGLEY: Thank you for that, and I think our last agenda item is other business, and Savannah, I believe, has an item for us.

MS. LEWIS: During the black drum annual compliance reports review process, the PRT discussed and recommended that the Board consider the use of a TLA for black drum. Black drum is a data poor species, and the stock assessment for black drum has already been delayed once, due to no change in terms of data

collection, and will likely be delayed again this year.

The last stock assessment was approved for management use in 2015, and indicated that black drum is not overfished, and not experiencing overfishing. The assessment did indicate that the medium biomass is estimated to be declining slowly. The use of the TLA would give the Technical Committee and the Board the ability to be proactive, and make sure that there is not any indication of stock trouble while the assessment is delayed. I wanted to bring this in front of the Board on behalf of the Plan Review Team for black drum.

CHAIR FEGLEY: Thank you, Savannah. Just to remind everybody. I believe that black drum is a species that we essentially everybody sort of froze their regulations where they were a number of years ago. I know Maryland wound up getting frozen in a moratorium. We've since filed, we created an addendum to allow some very limited harvest, harvest in Maryland that is consistent with what's happening in other states. I guess I'll just start by throwing this out to the Board for discussion. Does the Board support the development of a traffic light approach for black drum? Raise your hand. Chris Batsavage.

MR. BATSAVAGE: Just raising my hand for supporting it, thanks.

CHAIR FEGLEY: Okay, John Clark, I see your hand.

MR. JOHN CLARK: Like Chris, I think it's a good idea, I would support it.

CHAIR FEGLEY: Pat Geer.

MR. GEER: I think it's a good idea too, I mean I know it's more work for the TC, but it's a lot easier than a full stock assessment, so I would consider looking at it. I think it's a good idea too.

CHAIR FEGLEY: Okay, anybody else with commentary on a black drum traffic light? Savannah, do you need a motion for this, or is this something that the Board can just agree by consensus that the TC can go ahead and do?

MS. LEWIS: I'm going to double check with Toni, but I believe we need the Board to task the TC to make sure that this is something that is doable.

MS. KERNS: Lynn, we don't need a motion. As long as everybody is in concurrence with the task that the TC is going to explore a traffic light for black drum, and bring it back to the management board that's fine. I don't believe we would have enough time to do this between now and the May meeting, but I think we could do this between now and the August meeting, if that timeline is reasonable to the Board.

CHAIR FEGLEY: Yes, that was my next question is, when. What's the timeframe? I know this is a really busy group of people on Sciaenids, so August. I don't think this is a hair on fire situation, and I think August would be a really good time to see what sort of information they can pull together for a black drum traffic light.

Does anybody else have any other comments to add to this issue? Okay, so I think with that I'll just state for the record that we are in consensus to task the TC to explore a traffic light approach for black drum.

ADJOURNMENT

CHAIR FEGLEY: Okay, I think that gets us to the end of our agenda, so with that I would accept a motion to adjourn, or better yet I will ask if there is any objection to adjourning this meeting. If you object, raise your hand. Awesome, thank you everyone. I think we can adjourn, stay safe.

(Whereupon the meeting adjourned at 2:00 p.m. on March 18, 2021)

Atlantic States Marine Fisheries Commission

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MEMORANDUM

July 16, 2021

To: **Sciaenids Management Board**

From: **Savannah Lewis, FMP Coordinator**

RE: **Discussion of data limitations for the 2020 fishing year for the Traffic Light Analysis of spot and Atlantic croaker, and review of Atlantic croaker state implementation plan from Florida**

Attendees: Dawn Franco (Atlantic Croaker Chair, GA), Harry Rickabaugh (Spot Chair, MD), Chris McDonough (SC), Stacy VanMorter (NJ), Michael Greco (DE), Ellen Cosby (PRFC), Somers Smott (VA), Morgan Paris (NC), Joseph Munyandorero (FL)

Staff: Savannah Lewis, Jeff Kipp, Kristen Anstead, Mike Rinaldi

This memorandum serves as a summary of the joint Spot and Atlantic Croaker Technical Committees (TCs) call on June 23, 2021. The following outlines the TCs' discussions and recommendations for the Board regarding the 2020 data gaps of the Traffic Light Analysis (TLA). Additionally, a recommendation from the Atlantic Croaker TC regarding Florida's state implementation plan for their commercial Atlantic croaker industry is included.

Background

Annually, the TLA evaluates a Mid-Atlantic and a South Atlantic harvest metric, which is a combination of commercial and recreational landings in the region. It also evaluates a Mid-Atlantic and South Atlantic abundance metric, which is a combination of indices of abundance from 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 are exceeded in a set number of terminal years. In 2020, the TLA for the 2019 fishing year indicated that both species triggered at the 30% red threshold for both species, and state implementation plans for management measures were approved in early 2021.

Impact of COVID-19 on Data Availability

The COVID-19 pandemic had far reaching impacts economically on both the recreational and commercial industries. The annual TLA reports for spot and Atlantic croaker use data from both for the composite harvest metrics. While both datasets were available for 2020, there are

caveats for the 2020 fishing year harvest metric. While effort data for both species was uninterrupted, some of the recreational harvest rate data was imputed due to data gaps in dockside sampling for MRIP due to COVID-19. The amount of imputed data varied by species and along the coast, ranging from 0% in some states to over 70% in New Jersey due to gaps in dockside sampling. Closures and disruptions to the charter and headboat industry may have also impacted the recreational harvest metric. Fishery performance, markets, and effort throughout the year due to the pandemic impacted the commercial fleet. While data availability was maintained, the impact of the pandemic on the ability to fish, and comparability to previous years, of harvest metrics must be considered.

The pandemic directly impacted almost all state and federal fishery independent monitoring programs at some point during 2020. These impacts ranged from short term interruptions in sampling (on the scale of weeks or a month or two) to complete shutdowns for the year due to social distancing requirements on research vessels. The social distancing requirements made it impossible for some programs to work in enclosed spaces and close quarters for both daily sampling as well as extended at-sea work requiring days and weeks to complete. For the TLA, the impact was felt most significantly for the larger scale regional monitoring surveys, which were not able to sample at all in 2020. The Northeast Fishery Science Center (NEFSC) Multispecies Bottom Trawl Survey did not run in 2020, and is one of two surveys that makes up the Mid-Atlantic abundance index for both species. The South Atlantic abundance index for both species is based partially on the Southeast Area Monitoring and Assessment Program (SEAMAP), which also did not run in 2020. Both the Mid-Atlantic and South Atlantic abundance metrics could not be calculated for 2020 due to the missing data.

Other Data Issues

Another important fishery independent survey to the TLAs for both species is the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP). ChesMMAP did not have available data for 2019 or 2020 due to lack of calibration factors from a vessel and gear change that occurred in 2019. However, it is anticipated that data should be available in summer 2022 for all impacted years.

Recommendation

After reviewing the data gaps for the 2021 TLA reports on the 2020 fishing year for both spot and Atlantic croaker, the TCs discussed how to address the missing data and whether additional surveys should be added. The TCs determined for 2021 that, regardless of whether the data had been collected normally or not, management measures would not have changed as the result of 2020 data. With the TLA triggering management action for both species in 2020, and measures having been implemented in 2021, Addendum III for each species has a discriminate amount of time that measures have to be in place before measures can be liberalized based on values dropping below the triggering threshold. Spot measures have to be in place for two years, and Atlantic croaker for three. The TCs determined 2021 was the first year measures were in place, and measures for spot could not be relaxed until 2023 and Atlantic croaker until 2024 if abundance composite indices were below the 30% threshold. Because management

measures enacted would impact the harvest composite indices, only the adult abundance indices can be used to either trigger additional management measures or relax measures.

Moreover, the abundance indices for the 2020 fishing year would not have triggered additional management action for Atlantic croaker at the 60% threshold due to the required time period of elevated red levels outlined in the addendum. For Atlantic croaker to trigger at the 60% threshold, the proportion red must be above 60% for three out of the four most recent years. The harvest metric was above 60% in the Mid-Atlantic region but none of the last four years have been above 60% red for abundance metric. Therefore, elevated management response was not triggered at 60% threshold for Atlantic croaker. For spot, the indices would need to exceed 60% red for two out of the last three terminal years. There were no Mid-Atlantic composite adult abundance data points in 2019 or 2020, so the trigger response of this metric is unknown for the 2020 fishing year. However, the harvest metric in this region did not trigger at the 60% threshold for the 2020 fishing year. Therefore, an elevated management response for spot triggered by the 60% threshold could not be triggered.

For the annual TLA in 2022 using the 2021 fishing year data, the TCs will be able to revisit the composite abundance indices for both species. ChesMMAP data will be available for the missing time period (2019-2021), and availability of 2021 sampling data from NEFSC and SEAMAP will allow for a more robust estimation of a 2020 value for both surveys.

Consideration was given to the addition of NEAMAP into composite indices to help with missing 2020 data. The TC decided the adjusted reference period for NEAMAP, which does not contain the initial four years of data (2002-2006) representing healthy stocks for both species, made it inappropriate to add at this time. This adjusted reference period elevated the proportion of red within the abundance indices, and the addition of new surveys needs further consideration when there are not large data gaps. The TCs may revisit the addition of NEAMAP once it is incorporated into the next stock assessment.

Florida State Implementation Plan Review

While compiling data for the annual Atlantic croaker state compliance report for the FMP review, FWC staff noted that the state may no longer qualify *de minimis* status for the commercial fishery. Last year Florida was granted temporary *de minimis* status for the 2019 fishing year because they wanted one more year to evaluate if increases in harvest were a growing trend or an oddity. In anticipation of having to comply with Addendum III due to the TLA trigging in 2020, Florida submitted an implementation plan to reduce the 10-year average commercial landings by 1% to the TC for review and recommendation to the Board. The TC had no concerns with the state implementation plan, and found the methods to be technically sound. The TC recommends approval of the state implementation plan for adjusting state regulations for the commercial Atlantic croaker fishery.

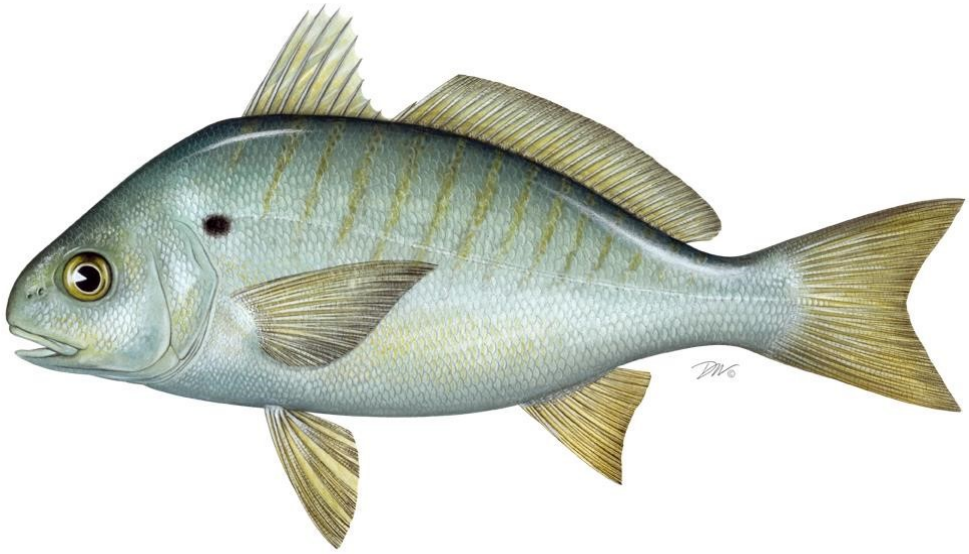
For more information, please contact Savannah Lewis, Fishery Management Plan Coordinator, at 703.842.0740 or slewis@asmfc.org.

DRAFT DOCUMENT FOR BOARD REVIEW

ATLANTIC STATES MARINE FISHERIES COMMISSION

2021 TRAFFIC LIGHT ANALYSIS REPORT FOR SPOT (*Leiostomus xanthurus)*

2020 Fishing Year



Prepared by the Technical Committee
Drafted June 2021

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

EXECUTIVE SUMMARY

Background

The purpose of this report is to evaluate the current status of spot using the annual Traffic Light Analysis (TLA). Spot is managed under Addendum III (2020) which outlined the population characteristics evaluated, management triggers, and management responses. Annually, the TLA evaluates a Mid-Atlantic and a South Atlantic harvest metric, which is a combination of commercial and recreational landings in the region. It also evaluates a Mid-Atlantic and South Atlantic abundance metric, which is a combination of indices of abundance from surveys in the region. Each metric is evaluated using a color proportion of green, yellow, or red based on comparing that year to a 2002-2012 reference period. Addendum III 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 are exceeded for either region in any two of the three terminal years.

Impact of COVID on Data Availability

The TLA harvest metric uses commercial and recreational harvest, both of which were available for 2020, although the pandemic impacted harvest and monitoring programs. The Mid-Atlantic abundance index is based on the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) which was not available for 2020 due to lack of calibration factors and the Northeast Fishery Science Center (NEFSC) Multispecies Bottom Trawl Survey which did not sample in 2020. The South Atlantic abundance index is based on the South Carolina Department of Natural Resources (SCDNR) Trammel Net Survey, which was available in 2020, and the Southeast Area Monitoring and Assessment Program (SEAMAP), which did not sample in 2020. Therefore, the harvest metric was calculated for 2020, but both the Mid-Atlantic and South Atlantic abundance metrics are incomplete for 2020.

2020 Harvest Metrics

The Mid-Atlantic harvest metric has triggered at 30% red in two of the three terminal years (2018 and 2019) and the South Atlantic harvest metric has triggered at 30% red in two of the three terminal years (2018 and 2019).

2020 Abundance Metrics

While abundance metrics could not be calculated due to missing 2020 data, Addendum III specifies TLA triggers based on the three terminal years so assumptions can still be made regarding abundance. For the Mid-Atlantic, one of the three terminal years triggered at 30% red (2018) while two of the three are unknown (2019-2020). This metric did trigger at 30% during 2020 TLA for the 2019 fishing year. In the South Atlantic, two of the three terminal years (2018-2019) did not trigger at any level and therefore the 2020 data would not change status regardless of its value.

Conclusions

The harvest triggered at the 30% threshold in both the Mid-Atlantic and South in 2020 indicating continued concern. The abundance did not trigger at any level for the South Atlantic and is undetermined for the Mid-Atlantic due to missing 2020 data, although it could be

determined that the Mid-Atlantic did not trigger at the elevated 60% threshold because the harvest metric did not trigger at this elevated level. Regardless, the previous TLA indicated that the Mid-Atlantic triggered at 30%. Addendum III requires management action taken in 2021 to remain in place for a minimum of two years (thorough and including the 2022 season). Therefore, the TC recommends maintaining management actions taken in 2021 during 2022.

1 INTRODUCTION

Spot is managed under the Omnibus Amendment for Spot, Spotted Seatrout, and Spanish Mackerel (2011), Addendum II (2014), and Addendum III (2020). The Omnibus Amendment updates all three species plans with requirements of the Atlantic States Marines Fisheries Commission's (ASMFC) Interstate Fisheries Management Program (ISFMP) Charter. The benchmark stock assessment for spot in 2017 was not recommended for management use due to uncertainty in biomass estimates from conflicting signals among abundance indices and catch time series, as well as sensitivity of model results to assumptions and model inputs.

Previously, in the absence of a coastwide stock assessment, the South Atlantic Board (SAB) approved Addendum II to the Spot Fishery Management Plan (FMP) in 2014. The Addendum established the use of a Traffic Light Analysis (TLA), similar to that used for Atlantic croaker, to evaluate fisheries trends and develop state-specified management actions (e.g., bag limits, size restrictions, time and area closures, and gear restrictions) when harvest and abundance thresholds are exceeded for two consecutive years. The TLA is a statistically-robust 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-poor species, or species which 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). For example, as harvest or abundance increase relative to their long-term mean, the proportion of green in a given year will increase and as harvest or abundance decrease, the amount of red in that year becomes more predominant. The TLA improves the management approach as it illustrates long-term trends in the stock and includes specific management recommendations in response to declines in the stock or fishery. Under Addendum II, state-specific management action would be initiated when the proportion of red exceeds specified thresholds (30% or 60%), for both harvest and abundance, over two consecutive years.

Starting in the late 2000s, there were inconsistent signals in the data used to examine the resource. While strong declines in harvest and reports of poor fishing prompted concern, management action was not triggered through the TLA because similar declines were not observed in abundance indices. These conflicting signals suggested the abundance indices being used in the TLA may not adequately represent coastwide adult abundance and the TLA may not be sensitive enough to trigger management action if declines in the population and fishery occur. Additionally, management lacked specificity in what measures to implement if a trigger did occur and how the fishery should be evaluated following management action. In February 2020, the SAB approved Addendum III to the Spot FMP. Addendum III addressed these issues by modifying the TLA to better reflect stock characteristics and identify achievable management actions based on stock conditions.

Addendum III incorporated the use of a regional approach to better reflect localized fishery trends and changed the TLA to trigger management action if two of the three most recent years of characteristics exceed threshold levels. These changes allow the TLA to better detect population and fishery declines. Addendum III also defined management responses for the

recreational and commercial fisheries and a method for evaluating the population's response to TLA-triggered management measures.

The following changes were incorporated into the TLA by Addendum III:

- Incorporation of indices from the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) and the North Carolina Division of Marine Fisheries (NCDMF) Pamlico Sound Survey (Program 195) into the adult composite characteristic index, in addition to the currently used indices from the Northeast Fisheries Science Center (NEFSC) Multispecies Bottom Trawl Survey and the South Atlantic component of the Southeast Area Monitoring and Assessment Program (SEAMAP).
- Use of revised adult abundance indices from the surveys mentioned above, in which age-length keys and length composition information are used to estimate the number of adult (age 1+) individuals caught by each survey.
- Use of regional metrics to characterize the fisheries north and south of the Virginia-North Carolina state border. The ChesMMAP and NEFSC surveys will be used to characterize abundance north of the border, and the NCDMF Program 195 and SEAMAP surveys will be used to characterize abundance south of the border.
- Change/establish the reference time period for all surveys to be 2002-2012.
- Change the triggering mechanism to the following: Management action will be triggered according to the current 30% and 60% red thresholds if both the abundance and harvest thresholds are exceeded in either region in any two of the three terminal years.

Addendum III also established a Spot Technical Committee (TC) with the ability to alter the TLA as needed to best represent trends in spot harvest and abundance, including selection of surveys and methods to analyze and evaluate these data. Such changes may be made without an addendum, but Addendum III was necessary because of the change to the management-triggering mechanism. The TC will evaluate state implementation of management responses triggered through the TLA.

This report includes the harvest and abundance composite indices in Section 2 which are the TLAs that trigger management action. Individual TLAs for commercial and recreational harvest by region, which go into the harvest composite, as well as effort and discards of spot in the South Atlantic Shrimp Trawl Fishery, which are included as supplementary information to be reviewed by the TC and are not included in harvest composite indices, are described in Section 4. TLAs for each fishery-independent index that go into the abundance composite, as well as indices of age zero abundance, which are included as supplementary information to be reviewed by the TC and are not included in abundance composite indices, are described in Section 5. Supplemental information with NEAMAP incorporated into the TLAs is provided in Section 6.

The 2020 TLA report indicated spot had red proportions that exceeded the 30% threshold of in both metrics in one region (Mid-Atlantic). 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 a recreational bag limit of no more than 50 spot per person per day. States with more restrictive measures in place were encouraged to maintain those measures. For commercial fisheries, states had to set a regulation that, if applied to the state's 2010-2019 average commercial harvest, would have produced at least a 1% reduction. States established different measures by trip limits or season modifications, as long as measures implemented were quantifiable and are projected to achieve this 1% reduction. All states have submitted state implementation plans to meet required recreational and commercial management measures. Management actions were initiated in 2021, and Addendum III specifies they will remain in place for a minimum of two years.

The COVID-19 pandemic had far reaching impacts on almost all state and federal fishery independent monitoring programs at some point during 2020. These impacts ranged from short term interruptions in sampling (on the scale of weeks or a month or two) to complete shutdown for the year due to social distancing requirements on research vessels. The social distancing requirements made it impossible for programs to work in enclosed spaces and close quarters for both daily sampling as well as extended at-sea work requiring days and weeks to complete. For the TLA, the impact was felt most significantly for the larger scale regional monitoring surveys (NEFSC groundfish survey and the SEAMAP survey) which were not able sample at all in 2020. Additionally, the ChesMMAP survey has not completed the calibration estimates for converting the index for use over the entire time series due to the vessel and gear change that occurred in 2019. ChesMMAP anticipates having the calibration estimates completed in 2022. NEFSC and SEAMAP data will be available for 2021, and future TLAs will be able to utilize the most recent years (2019-2021) of the data series beginning with the 2021 fishing year TLA report.

The COVID-19 pandemic also had far reaching impacts economically on both the recreational and commercial industries. While both commercial and recreational harvest datasets were available for 2020, there are caveats for the 2020 fishing year harvest metric. The component of the Marine Recreational Information Program (MRIP) that samples dockside catch rate data (Access Point Angler Intercept Survey - APAIS) was interrupted by the pandemic. Due to this interruption, catch rate data were imputed as needed from 2018 and 2019 to generate total catch estimates in 2020. The contribution of imputed data for spot harvest estimates by state ranged from 0-69% (Table 1). The impact of imputed data on total catch estimates is unknown. While data availability was maintained, the impact of the pandemic on the accuracy of harvest metrics must be considered.

Table 1. Contribution of imputed harvest rate data from 2018 and 2019 for 2020 MRIP harvest estimates of spot.

State	2020 Harvest (A+B1) Total Weight (lb)	PSE	Contribution of Imputed Data to Total Harvest Rate
NEW YORK	1,000	101.6	0%
NEW JERSEY	450	96.3	0%
DELAWARE	19,392	28.9	0%
MARYLAND	1,019,065	18	1%
VIRGINIA	4,589,353	38.4	13%
NORTH CAROLINA	297,813	17.7	4%
SOUTH CAROLINA	131,952	32	9%
GEORGIA	7,377	52.8	0%
FLORIDA	234,040	60.4	69%

2 TRAFFIC LIGHT ANALYSIS (COMPOSITE INDICES)

2.1 Harvest Composite Characteristic Index

- The harvest (recreational and commercial landings) composite TLA index showed an increase in landings in 2020 in both the Mid-Atlantic and South Atlantic (Figure 1 and Figure 2). However index levels were still well below the long term mean.
- The composite characteristic for the Mid-Atlantic has exceeded the 30% threshold for four of the last six years (Figure 1) with an average red proportion of 40.4%. The red proportion in 2020 was below the 30% threshold but still triggered since it was above that threshold for two of the terminal three years (2018-2020).
- The composite characteristic for the South Atlantic has exceeded the 30% threshold for three of the last four years (Figure 2) with an average proportion of 35.6%. Although the red proportion in 2020 was below the 30% threshold it still triggered since it was above that threshold for two of the terminal three years (2018-2020).
- The TLA composite index triggered in 2020 at the 30% threshold for both regions.

Figure 1. Annual harvest composite (commercial and recreational landings) TLA color proportions for Mid-Atlantic (NJ-VA) spot using a 2002-2012 reference period.

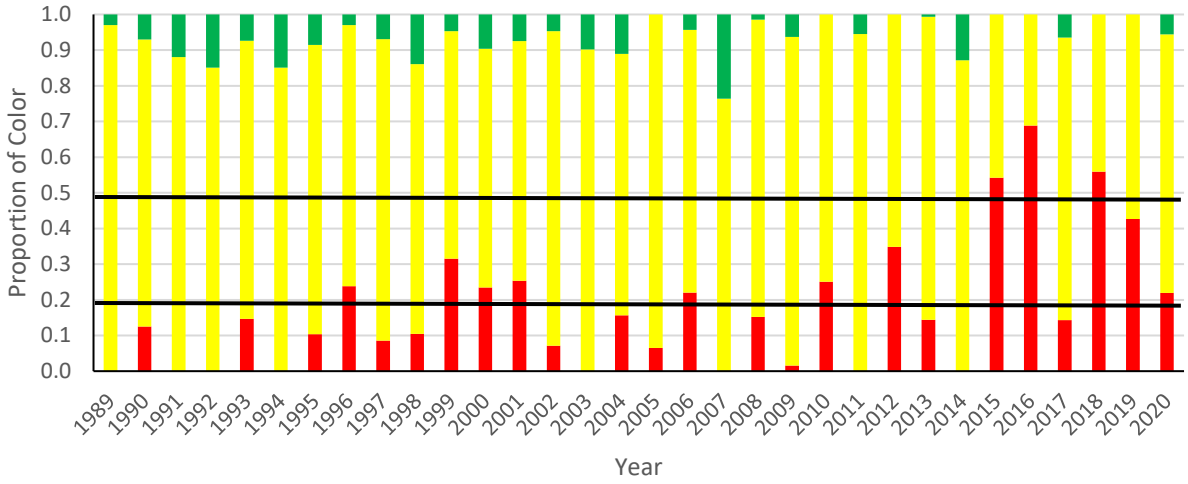
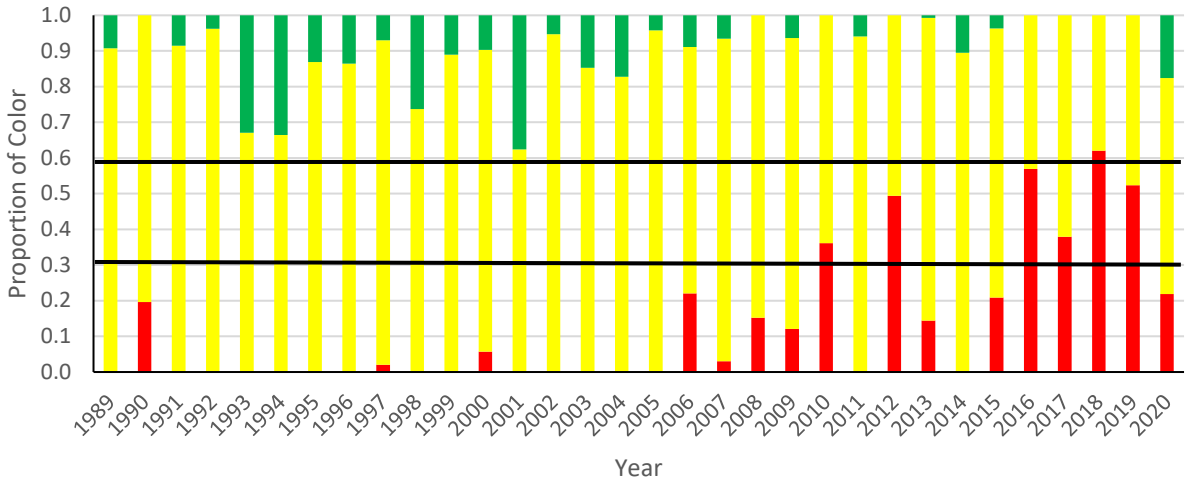


Figure 2. Annual harvest composite (commercial and recreational landings) TLA color proportions for South Atlantic (NC-FL) spot using a 2002-2012 reference period.



2.2 Abundance Composite Characteristic Index

**Important note:

The NEFSC and SEAMAP trawl surveys did not operate in 2020. The ChesMMAP survey has not completed the calibrations necessary to convert the 2019 and 2020 index values that would allow use of the entire time series after the vessel and gear changes that occurred in 2019 (see ChesMMAP section below). ChesMMAP was able to sample in 2020, so once calibration exercises are complete the index data should be available in 2022. Therefore, the NEFSC fall groundfish survey and SEAMAP are only presented through 2019 in this report, ChesMMAP

only goes through 2018, and all three surveys have not been updated from the 2020 TLA report on the 2019 fishing year.

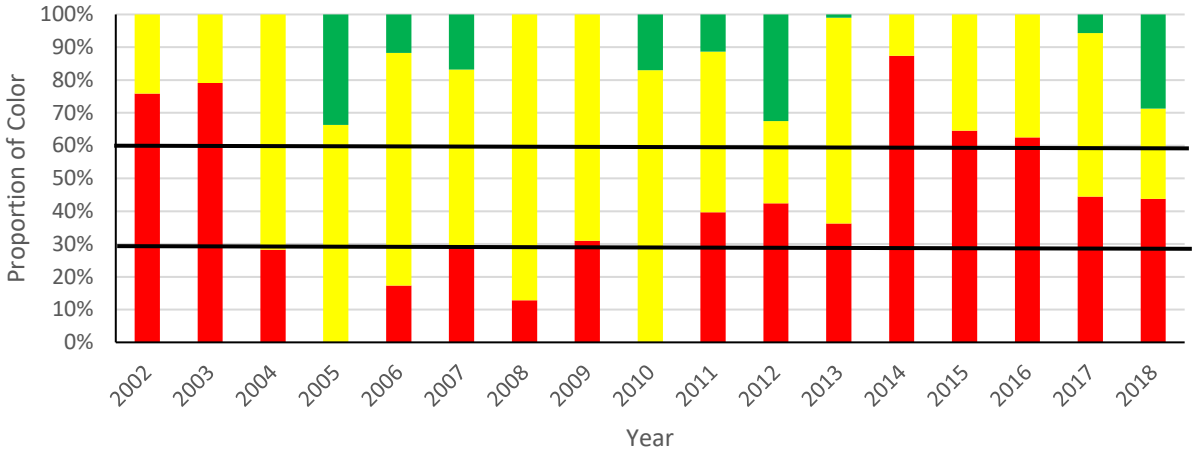
The abundance composite TLA index for spot in each region is broken into two components based on age composition, including an adult index and a juvenile index. Only adult abundance is used to determine if management action is triggered. Juvenile data is presented as supplementary information only (Section 5). The adult composite index was generated from the NEFSC and ChesMMAP surveys for the Mid-Atlantic and SEAMAP and NCDMF Program 195 in the South Atlantic since the majority of spot captured in these surveys were ages 1+. Since neither Mid-Atlantic index was available in 2020 and only NEFSC data was available for 2019, the TLA still uses 2018 as the terminal year. Both NEFSC and ChesMMAP survey indices should be available for the 2021 sampling year, as well as calibrated indices for 2019 and 2020 for ChesMMAP.

In the South Atlantic, SEAMAP data was not available in 2020 because the survey did not run, so data is only presented through 2019. The NCDMF Pamlico Sound Trawl Survey (Program 195) data was available in 2020 for both adults and juveniles but is currently only used in the TLA as a juvenile index for the south Atlantic. Sampling during the 2020 season for Program 195 was restricted to day trips and only the sites accessible from a nearby port were sampled which primarily included the river strata (Neuse River, Pamlico River, and Pungo River) and those sites close to the mouth of the rivers. A total of 28 stations were towed during the June 2020 survey (54 stations are sampled in June under normal conditions).

2.2.1 Mid-Atlantic

- The TLA composite characteristics for spot abundance (NEFSC and ChesMMAP surveys) in the Mid-Atlantic did not have 2019-2020 data points since the ChesMMAP survey indices were not available (Figure 3).
- The adult index triggered at the 30% threshold in the 2018 fishing year because the red proportions in the index have exceed the 30% threshold for the previous five years (Figure 3).

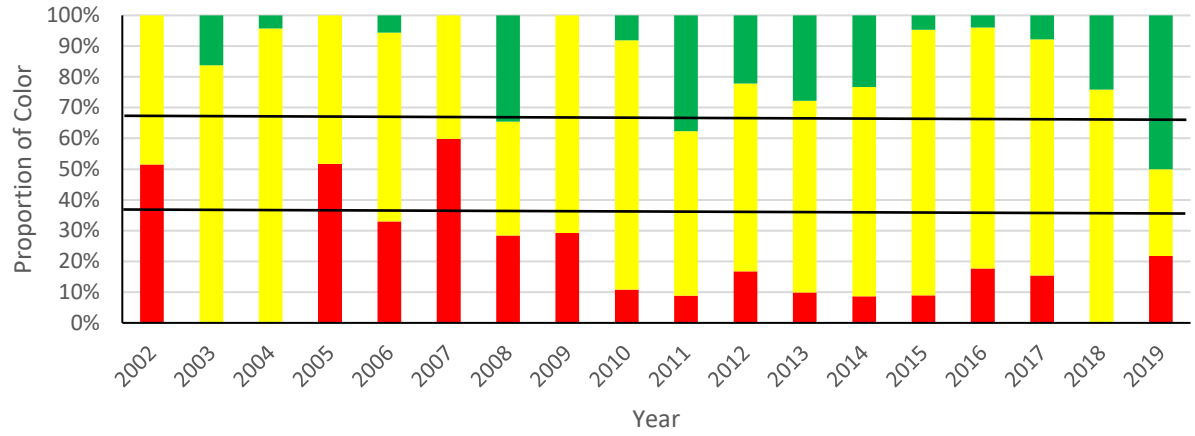
Figure 3. Annual TLA composite characteristic for adult (age 1+) spot in the Mid-Atlantic (NJ-VA) (NEFSC and ChesMMAP) using a 2002-2012 reference period.



2.2.2 South Atlantic

- Since SEAMAP data was not available for 2020, the TLA composite presented only goes through 2019, although the NCDMF Program 195 data was available for 2020 (see Section 5.4 below) and did have a red proportion of 31.5%. The South Atlantic adult abundance composite characteristic did not trigger in the 2019 fishing year since none of the red proportions from 2017-2019 exceeded the 30% red threshold (Figure 4). There has been a bit of conflict in the index with both red and green proportions in the same years. This has been due to the NCDMF Program 195 index having higher red proportions and SEAMAP having relatively high green proportions in recent years.

Figure 4. Annual TLA composite characteristic for adult spot (age 1+) in the South Atlantic (SEAMAP and NCDMF Program 195) using a 2002-2012 reference period.



3 SUMMARY

- The harvest composite TLA for spot exceeded the 30% threshold in both regions and triggered in 2020.
- The Mid-Atlantic abundance composite characteristic did not have 2019-2020 data points, but did trigger the two previous years thus triggering at 30% in last year's TLA.
- The South Atlantic abundance composite characteristic did not trigger in 2020 for adults with red proportions in the terminal three years either not present or below the 30% threshold of concern.
- With the harvest TLAs triggering at 30% for both regions in 2020, significant management concern cannot be trigger by the TLA for either region (60% red threshold) and coastwide management action outlined in Addendum III remains triggered at the moderate concern level in 2021.
- Table 2 provides an overview of the past three years of trigger thresholds for each region, as well as the current TLA status. The adult abundance indices currently have an unknown status; as discussed above, ChesMMAP will be available in the future once calibration factors are developed.

Table 2. Traffic light metrics for the Mid- and South Atlantic regions with known and unknown values, given missing 2020 data. Management action is triggered according to the current 30% red and 60% red thresholds if both the adult abundance and harvest thresholds are exceeded in any two of the three terminal years within either region.

TLA Metric	Spot		
	2018	2019	2020
Mid-Atlantic Harvest	56% red	43% red	22% red
South Atlantic Harvest	62% red	52% red	22% red
Mid-Atlantic Adult Index	44% red	Unknown	Unknown
South Atlantic Adult Index	24% green	50% green	Unknown; cannot trigger regardless of 2020 data
2021 TLA Status	Triggered at 30% (Mid-Atl Harvest, S. Atl Harvest, Mid-Atl Index unknown; S. Atl Index did not trigger)		

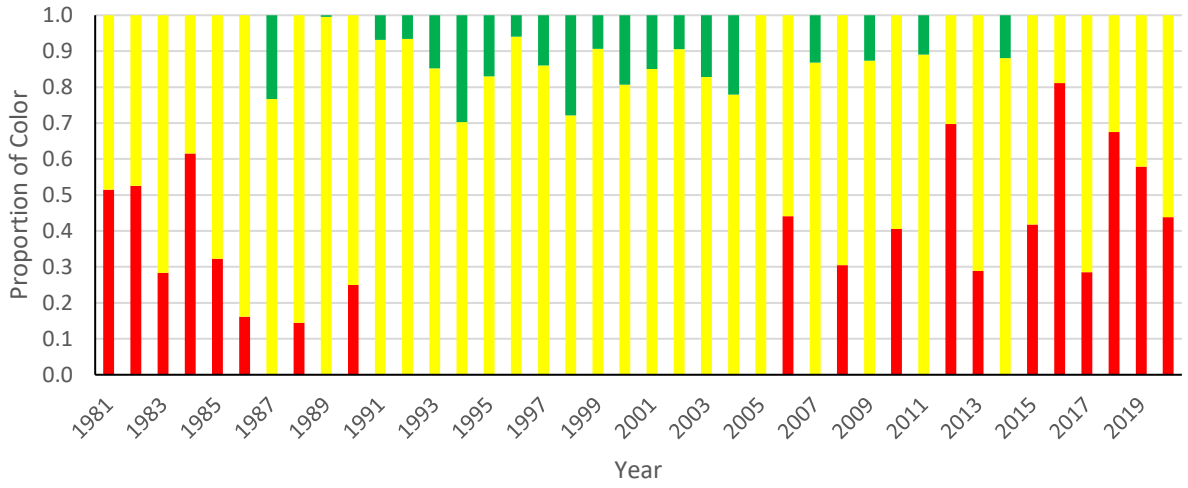
4 TRAFFIC LIGHT ANALYSIS (FISHERY DEPENDENT)

4.1 Commercial Landings

4.1.1 Mid-Atlantic

- Commercial landings of spot on the Atlantic coast increased 44.6% in 2020 from 2019. Landings were still well below the long term mean, although they were up from the time series low which occurred in 2016. Long term, commercial landings are still relatively low, a trend that has been occurring since 2003. Total annual landings have declined 68.6% from 2004 to 2020 (Figure 5).
- The TLA for commercial landings in the Mid-Atlantic peaked in the 1990s and early 2000s (Figure 5). The general trend has been a decline since 2005, although there is some year-to-year variability between red and green proportions. In the last six years the red proportion has been above the 30% threshold in all but one year.
- The TLA commercial index was above the 30% threshold level in 2020 and represents the third year above this threshold.

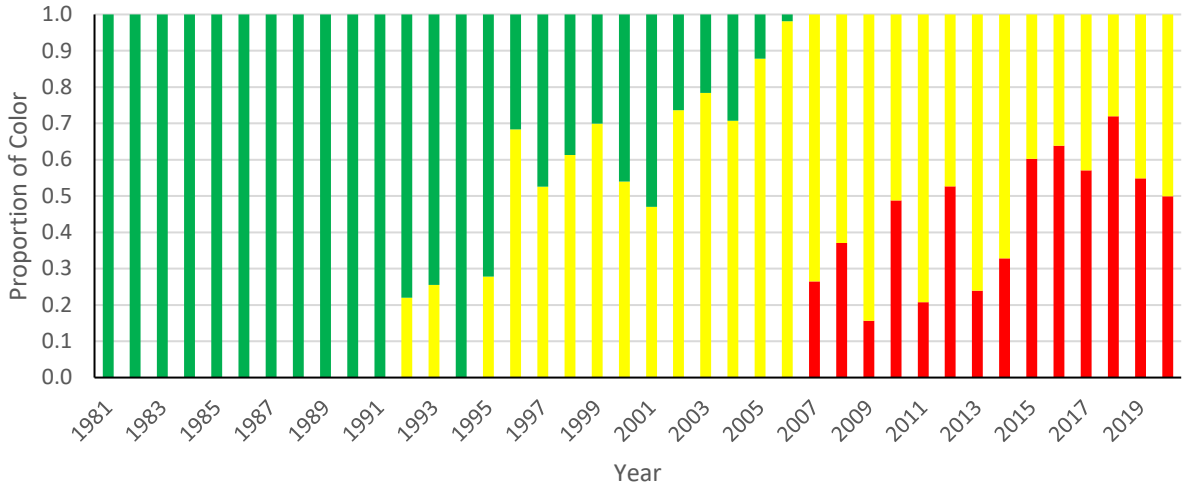
Figure 5. Annual TLA color proportions using 2002-2012 reference period for spot from commercial landings for the Mid-Atlantic (NJ-VA) coast of the US.



4.1.2 South Atlantic

- In the South Atlantic, commercial spot landings were high from the 1980s through the mid-2000s (Figure 6). Commercial spot landings began to decline steadily from 2005 onward and red proportion levels have been above the 30% threshold for most years since 2010. Commercial spot landings in the south Atlantic increased 13.6% in 2020, but red proportion was still above the 30% threshold.
- The continued decline in commercial landings may be due to changes in effort in some other fisheries (most notably the shrimp trawl fishery) so it is difficult to determine the exact cause of the general decline in commercial landings in the South Atlantic.

Figure 6. Annual TLA color proportions using a 2002-2012 reference period for spot from commercial landings for the South Atlantic (NC-FL) coast of the US.



4.2 Commercial Discards

4.2.1 South Atlantic

- Discard estimates of spot in the South Atlantic Shrimp Trawl Fishery are informed by catch rates observed during the SEAMAP Coastal Trawl 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.
- Total effort (net hours) in the South Atlantic Shrimp Trawl Fishery declined from a time series high in 1991 to a time series low in 2005 (Figure 7). Effort then varied around an increasing trend through 2017 and was variable and lower through 2020.
- Total discards of spot in the South Atlantic Shrimp Trawl Fishery were highest during the late 1980s and early 1990s, declined to relatively low levels in the 2000s, and then increased to slightly higher levels in the 2010s (Figure 7; right). Discards in the last two years of the time series were highly variable, decreasing from one of the highest estimates in 2019 to one of the lowest estimates in 2020.
- There were no SEAMAP Coastal Trawl Survey tows conducted in 2020, so the trend for the 2020 discard estimate relative to previous years is solely informed by South Atlantic Shrimp Trawl Fishery Observer catch rates. Further, there was reduced observer coverage of shrimp trawl fisheries during 2020. Sampling occurred January-March and August-November at levels similar to prior years which includes months in both seasons (off-season and peak-season) used as a factor in the model to estimate catch rates, but there was no observer coverage from April-July. The observer catch rates of spot over the reduced sampling season in 2020 declined relative to 2019 catch rates using both full observer coverage and SEAMAP tows, and this trend was likely influenced by the

lack of SEAMAP tows and reduced observer coverage. Figure 8 shows how the trends in catch rates track in years prior to 2020. As in all years, the magnitude of the 2020 discard estimate is informed by the observer data (magnitude of catch rates) and shrimp trawl effort data (expansion factor to expand catch rates to total discards), so the magnitude of catch rates was likely also impacted by reduced observer coverage.

- For additional information on the South Atlantic Shrimp Trawl Fishery discard estimation, please see Appendix 1 of the 2020 TLA Update Report.

Figure 7. Total net hours fished (left) and discards of spot (right) in the South Atlantic Shrimp Trawl Fishery.

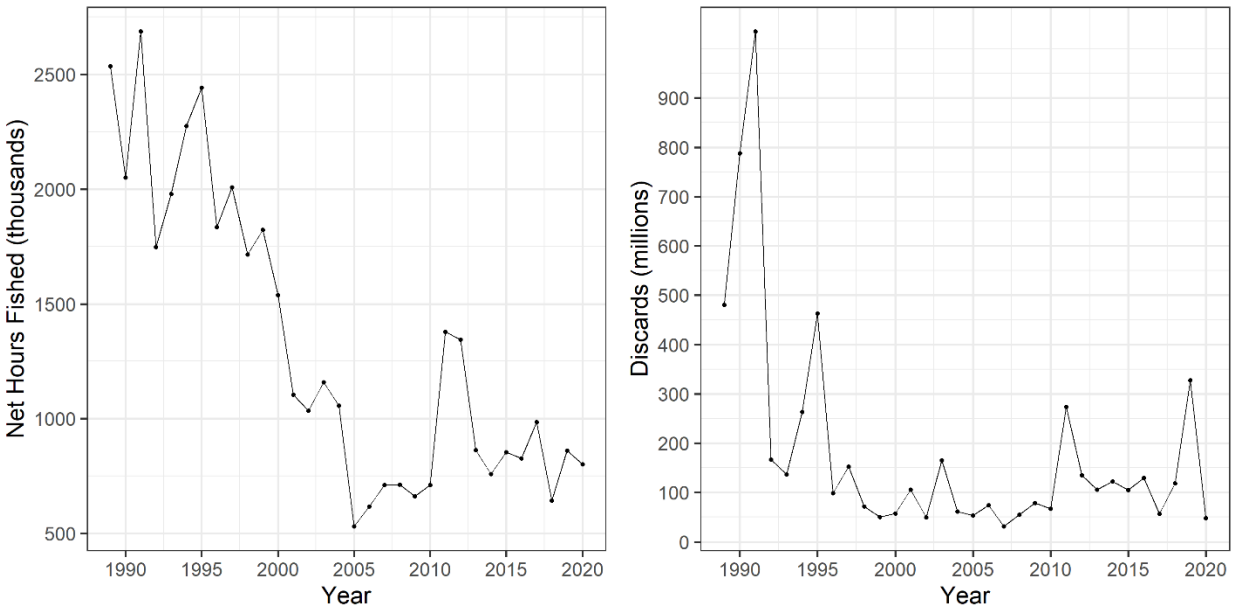
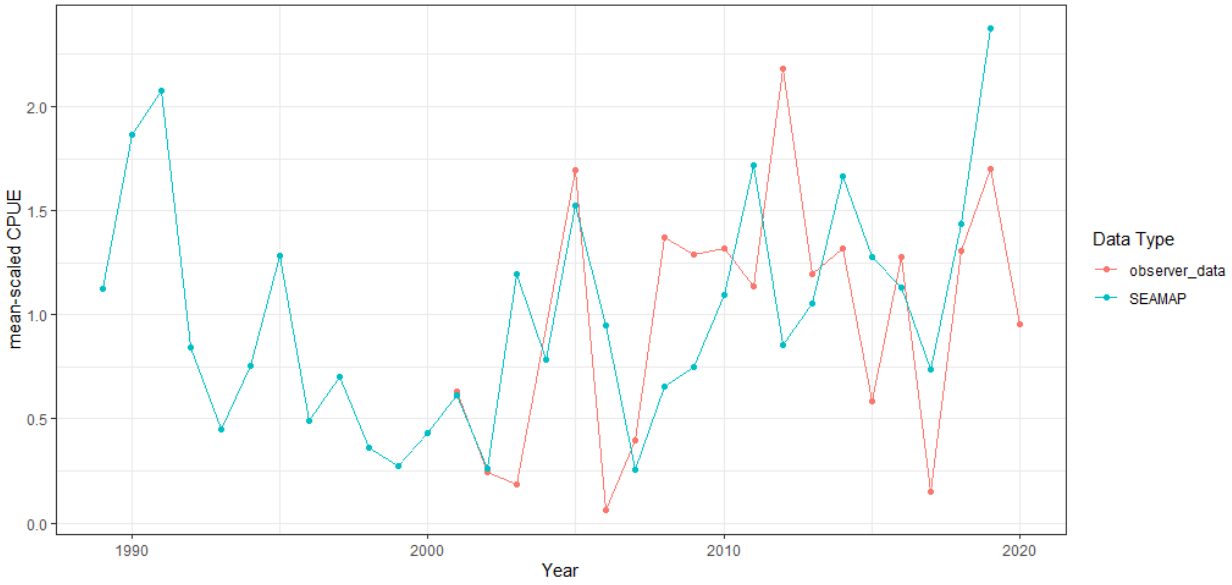


Figure 8. Comparison of spot mean-scaled catch-per-unit-effort from SEAMAP Coastal Trawl Survey data and South Atlantic Shrimp Trawl Fishery Observer data.



4.3 Recreational

In July 2018, the Marine Recreational Information Program transitioned from the catch estimates based on effort information from the Coastal Household Telephone Survey (CHTS) to effort information from the mail-based Fishing Effort Survey (FES). FES estimates are used in this and future reports, so recreational estimates and analyses may be different from previous years that used CHTS estimates.

- The recreational harvest of spot on the Mid-Atlantic coast increased 94.4% in 2020 from 2019, with values of 5,814,976 pounds and 2,991,200 pounds, respectively.
- Annual harvest in the recreational fishery has been above the long term mean (LTM) for the second time since 2015 (Figure 9).
- There was no red in the TLA in 2020 and a green proportion of 11.2%. The recreational TLA only exceed the 30% threshold in one of the last three years (2018; Figure 9).
- In the South Atlantic, recreational harvest increased 329% in 2020 (6,574,038 lbs) from 2019 (1,531,869 lbs).
- Recreational harvest in 2020 was above the long term mean as evidenced by a green proportion of 35.2%. Although, red proportions have been above the 30% threshold since 2016 (Figure 10) and the index did trip since it exceeded the 30% red threshold in 2 of the three terminal years.

Figure 9. Annual color proportions for the Mid-Atlantic (NJ-VA) coast of the US for recreationally harvested spot using a 2002-2012 reference period.

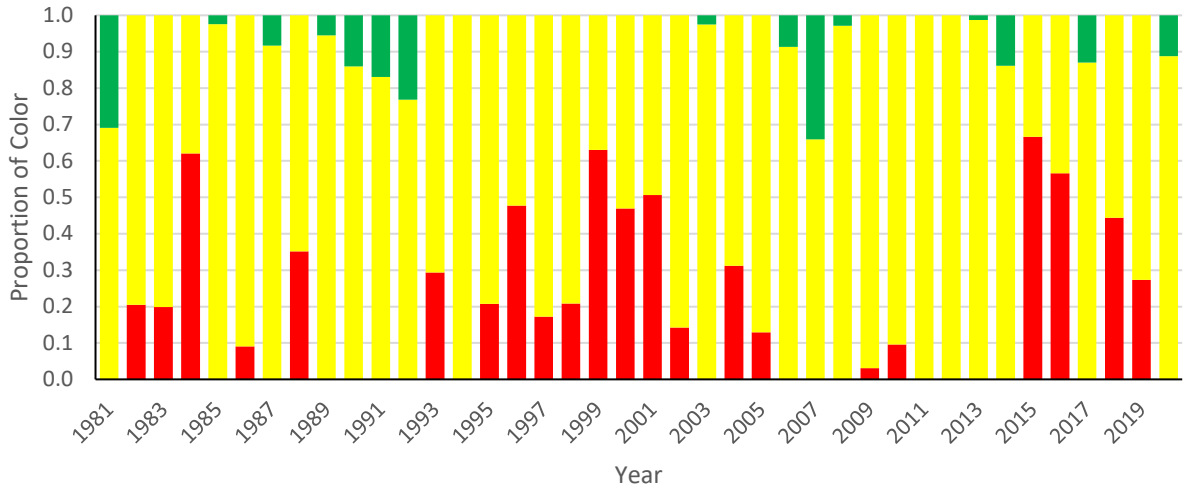
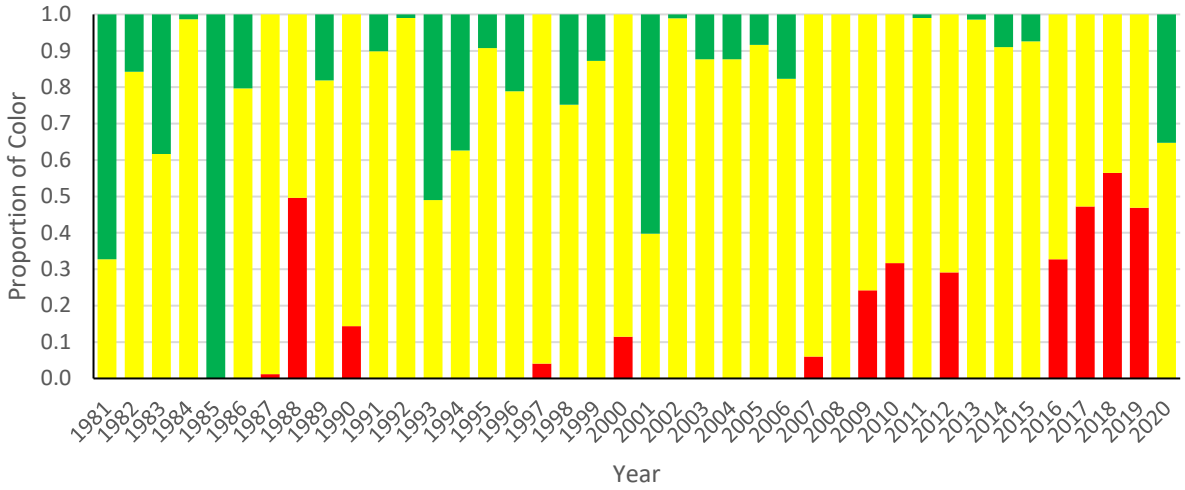


Figure 10. Annual color proportions for the South Atlantic (NC-FL) coast of the US for recreationally harvested spot using a 2002-2012 reference period.

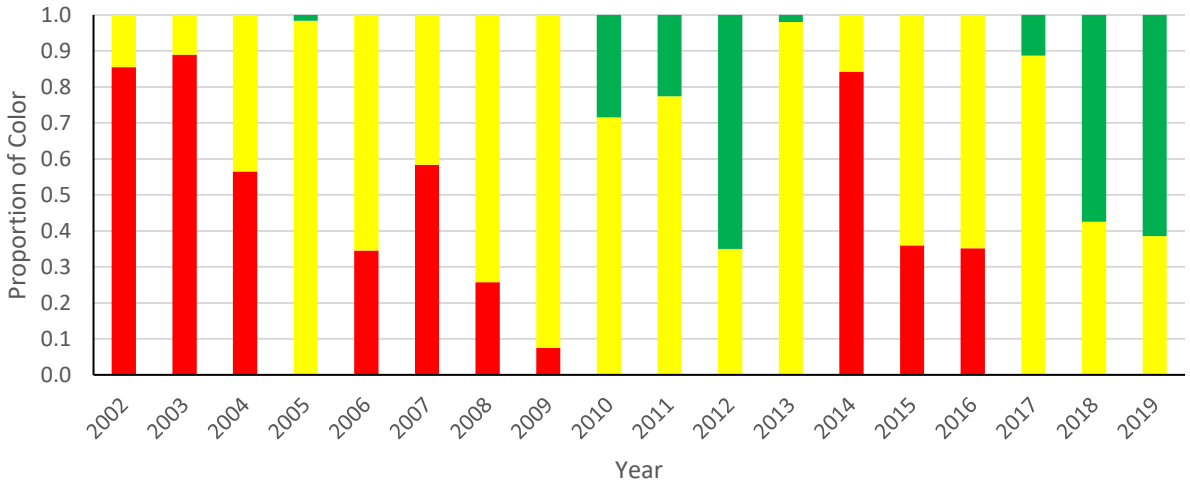


5 TRAFFIC LIGHT ANALYSIS (FISHERY INDEPENDENT)

5.1 NEFSC Fall Groundfish Trawl Survey

- Since there was no sampling carried out in 2020 for the NEFSC survey, the TLA data is the same as the 2019 report.
- The CPUE for spot in 2019 increased 4.4% from 2018 and was in a similar range to the series peak value seen in 2012.
- There was no red in the TLA index for 2019, so this index did not exceed the 30% threshold (Figure 11).
- The NEFSC was not carried out in 2017 due to mechanical problems with the RV Bigelow. An imputed index for 2017 was calculated as the mean of 2015-2016 and 2018.

Figure 11. Annual TLA color proportions for adult spot (age 1+) from Mid-Atlantic NEFSC fall groundfish trawl survey using a 2002-2012 reference period.



5.2 ChesMMAP Trawl Survey

- The ChesMMAP survey made major changes to the survey in 2019 (vessel change, gear change, altered protocols, etc.) but maintained the same sampling strata and design. Side-by-side comparison tows were made between the new and old vessels/gears and the survey is in the process of producing conversion factors by species so that historic survey index values can be compared to ongoing survey values in the future. Since the conversion factor determination won't likely be finished until 2022, the ChesMMAP index is only available through 2018 for the adult and juvenile TLA composite characteristics.
- The juvenile spot index showed a declining trend from the late 2000s through the present (Figure 12) with high proportions of red. Red proportions exceeded the 30%

threshold for all years since 2011 and exceeded the 60% threshold for six of the last eight years in the data series.

- The adult spot index also showed a similar declining trend during the same time period (2010-2018) with red proportions exceeding the 60% threshold in the terminal four years of the time series (Figure 13).
- With the currently missing values for 2019-2020, whether or not the ChesMMAP index would have exceeded either the 30% or 60% thresholds of concern is unclear (Figure 12 and 13). These index values will be available in the future (likely 2022), but until then any estimate of whether the ChesMMAP index triggered in 2020 is speculative.

Figure 12. Annual TLA color proportions for juvenile spot (age 0) from the Mid-Atlantic ChesMMAP survey using a 2002-2012 reference period.

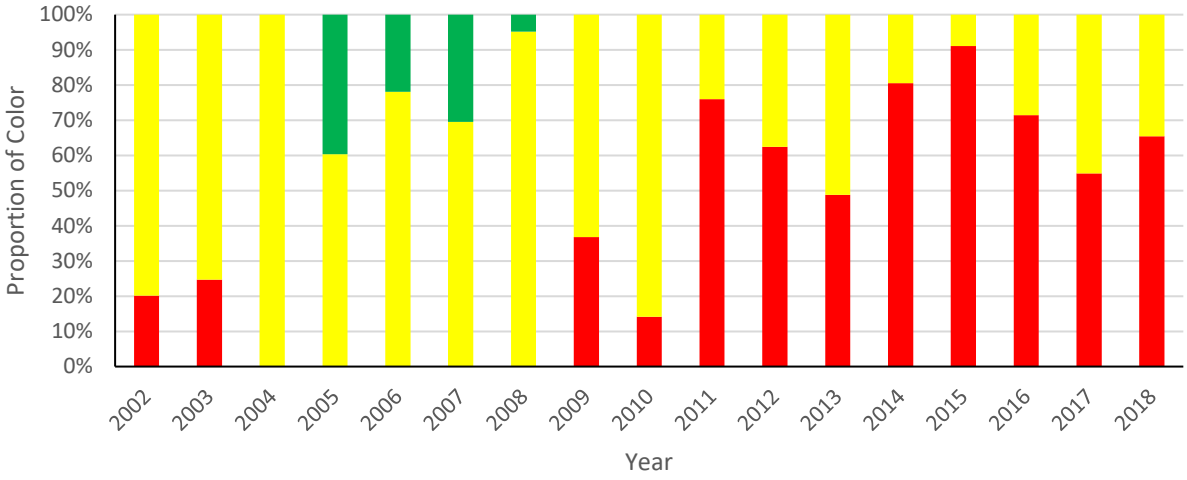
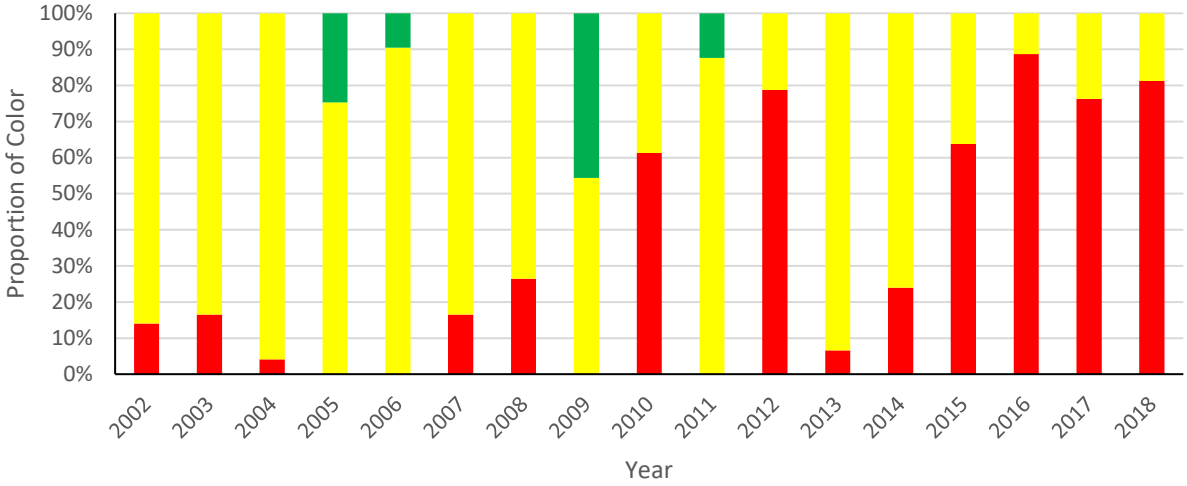


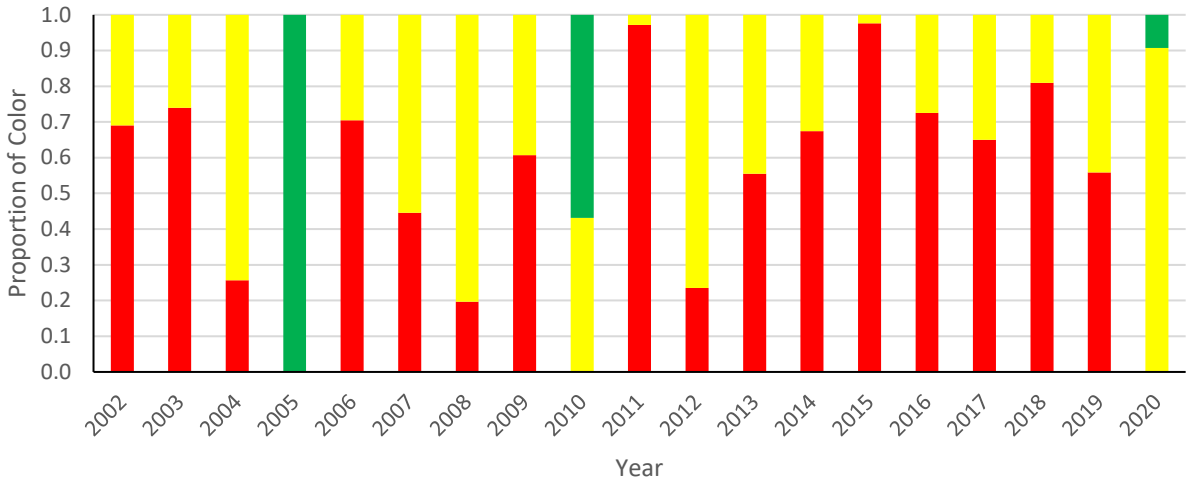
Figure 13. Annual TLA color proportions for adult spot (age 1+) from the Mid-Atlantic ChesMMAP survey using a 2002-2012 reference period.



5.3 Maryland Juvenile Fish Seine Survey

- The Maryland CPUE increased 165% in 2020 from 2019, and was above the long-term mean for the first time since 2010 (see green proportions in Figure 14).
- CPUE was above the long-term mean for the first time since 2010, indicating annual recruitment was up in the Maryland portion of the Chesapeake Bay in 2020.
- Although the TLA did not have any red in 2020, the index still exceeded the 30% threshold for two of the three terminal years and tripped in 2020.
- While spot numbers were up in 2020, the index still exceeded the 30% threshold level for the 2013-2019 time-period indicating there is still cause for concern for a general decline in recruitment in Maryland waters.

Figure 14. Annual TLA color proportions for the Mid-Atlantic Maryland seine survey juvenile spot (age 0) index using a 2002-2012 reference period.



5.4 NCDMF Program 195 (Pamlico Sound Survey)

- The NCDMF Program 195 survey saw declines in juveniles as indicated by increasing red proportions in the juvenile TLA (Figure 15) in 2020. The adult TLA in indicates a slight increase in abundance indicated by the decreasing red proportions in 2020, but remained above the 30% threshold (Figure 16).
- The juveniles abundance declined 55.6% in 2020 (240.6 fish per set) versus 2019 (542.4 fish per set) with the red proportion exceeding the 30% threshold for the first time since 2016 (Figure 15).
- The adult abundance increased slightly (21.4%) in 2020 compared to the decline seen in 2019 (33.0%) (Figure 15). The adult TLA red proportions exceeded the 30% threshold for four of the last five years (2016-2017 and 2019-2020).

- The adult TLA did trigger at the 30% in 2020 with two of the previous three years exceeding that threshold (2019-2020)
- Note sampling during June 2020 was limited to day trips and only the sites accessible from a nearby port were sampled – which primarily included the river strata (Neuse River, Pamlico River, and Pungo River) and those sites close to the mouth of the rivers. A total of 28 stations were towed during June 2020 (54 stations are sampled each June under normal conditions)

Figure 15. Annual TLA color proportions for juvenile spot (age 0) from the South Atlantic NCDMF Program 195 Survey using a 2002-2012 reference period.

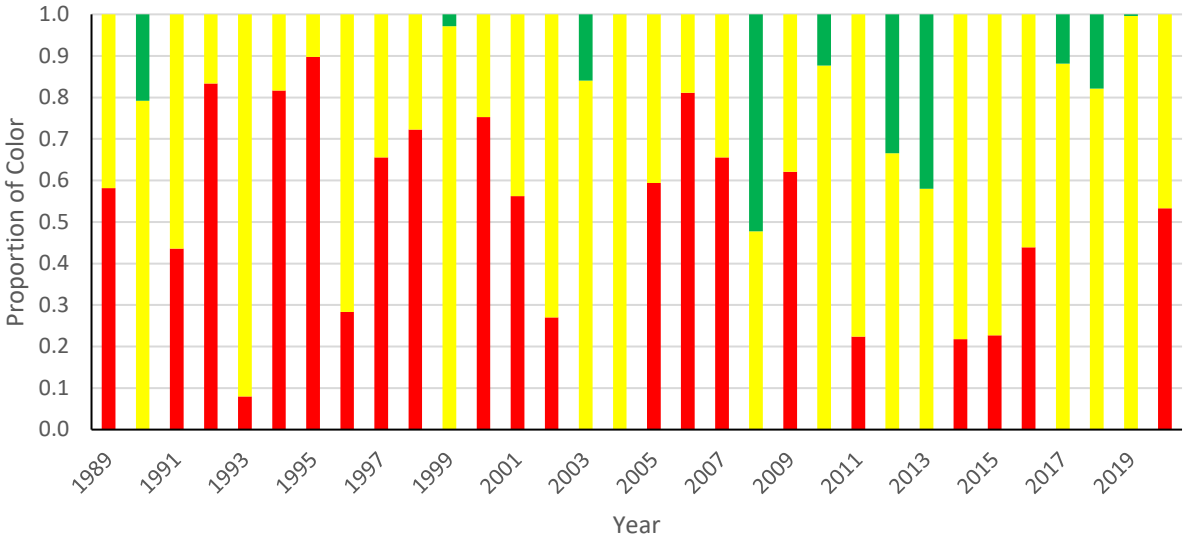
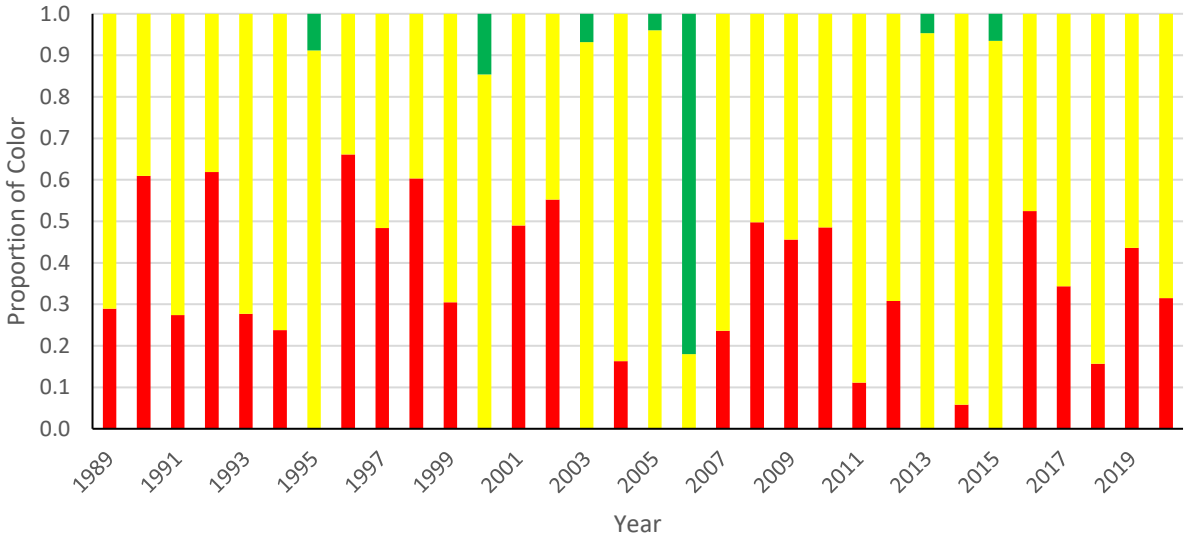


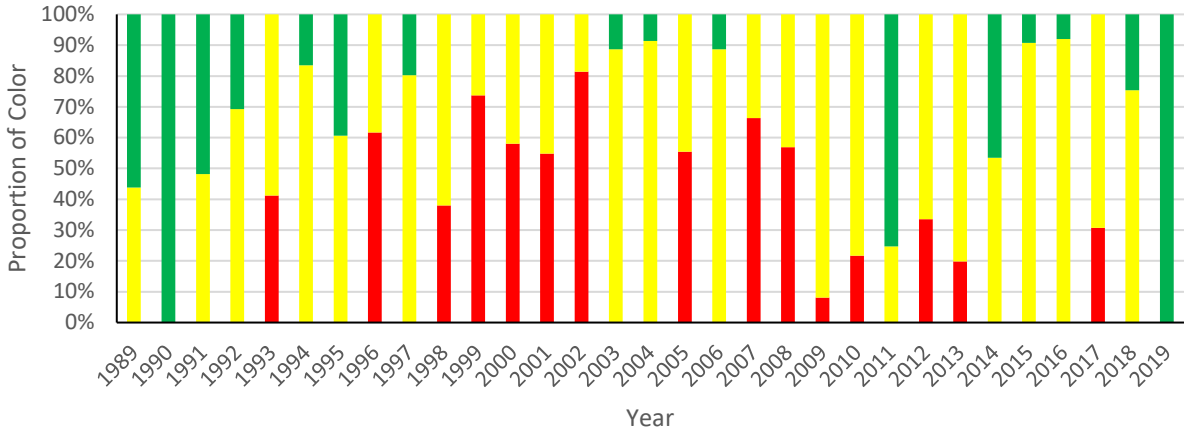
Figure 16. Annual TLA color proportions for adult spot (age 1+) from the South Atlantic NCDMF Program 195 Survey using a 2002-2012 reference period.



5.5 SEAMAP Trawl Survey

- Since there were no SEAMAP cruises in 2020, the current TLA only reflects data through 2019.
- The SEAMAP index used the spring season CPUE because it only catches adult spot (age 1+) during that season.
- The annual CPUE increased 265% in 2019 (48.6 kg/tow) from 2018 (13.3 kg/tow) and was the highest value in the time series.
- The TLA index has only exceeded the 30% threshold once in the past seven years (Figure 17).

Figure 17. Annual color proportions for Adult spot (age 1+) TLA from the fall South Atlantic SEAMAP survey using a 2002-2012 reference period.

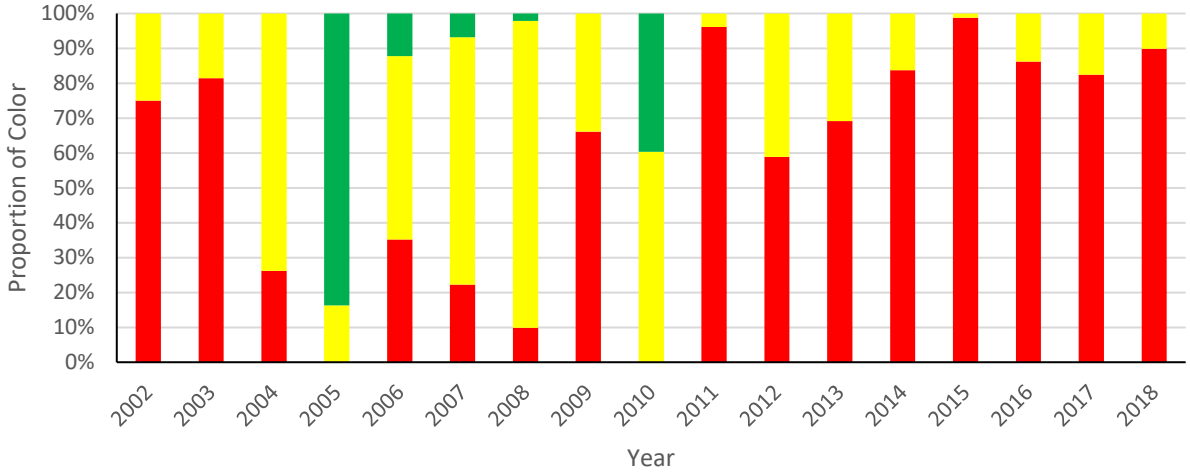


5.6 Juvenile Abundance Composite Indices

The juvenile composite index in the Mid-Atlantic was generated from the ChesMMAP and the Maryland juvenile fish seine survey. ChesMMAP has an age specific index for ages 0 which allowed its use as a juvenile index. The juvenile composite uses a terminal year of 2018, the most recent year the ChesMAPP index is available.

- The juvenile spot TLA for the Mid-Atlantic (MD survey and ChesMMAP) also showed a general decline in recruitment with very high red proportions for the last 8 years (Figure 18).
- The juvenile composite index was above the 30% threshold in two of the three terminal years (Figure 18).
- The South Atlantic juvenile spot index (NCDMF Program 195), CPUE declined 55.6% in 2020 (240.6 fish per set) versus 2019 (542.4 fish per set) with the red proportion exceeding the 30% threshold for the first time since 2016 (See Figure 15).

Figure 18. Annual TLA for juvenile (age 0) spot for composite characteristic of fishery independent suveys in the Mid-Atlantic (NJ-VA) (MD seine survey and ChesMMAP) using a 2002-2012 reference period.



6 SUPPLEMENTAL MATERIALS

6.1 NEAMAP Survey

One additional survey that is available in the Mid-Atlantic is the Northeast Area Monitoring and Assessment Program (NEAMAP) which samples from Block Island Sound south to Cape Hatteras. The NEAMAP survey has been considered for use in the TLA but is currently not used due to the shorter time frame (2007-2020) compared to the other surveys. This section describes the trends in the NEAMAP survey and gives composite characteristics that include NEAMAP.

- The juvenile spot TLA index shows the evidence of low recruitment across all years except 2008 and 2012. This is similar to the declining trends seen in the MD seine survey and the ChesMMAP survey across the same years.
- Red proportions in 2020 exceeded the 30% threshold (Figure 19).
- The adult spot TLA index showed a generally declining trend from 2010 through 2018 with red proportions exceeding the 60% threshold but has increased above the long term mean with green proportions in the last two years (Figure 20). 2020 showed a significant increase in spot abundance.
- The trend in higher red proportions was very similar to the trends seen in the ChesMMAP survey across years prior to 2019, but did not correlate with the NEFSC survey in terms of general trends.
- The juvenile TLA did exceed the 30% threshold in 2018 and 2020 but not in 2019, thus would have triggered in two of the three terminal years. The adult index did not trigger in 2020.

Figure 19. Annual color proportions from TLA for juvenile (age 0) spot from the Mid-Atlantic NEAMAP survey using a 2007-2019 reference period.

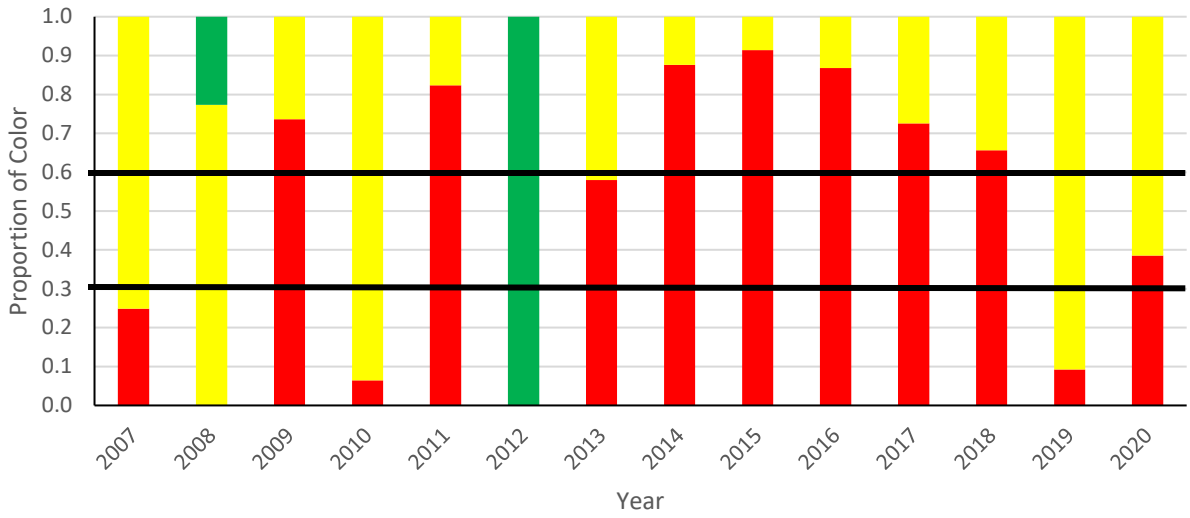
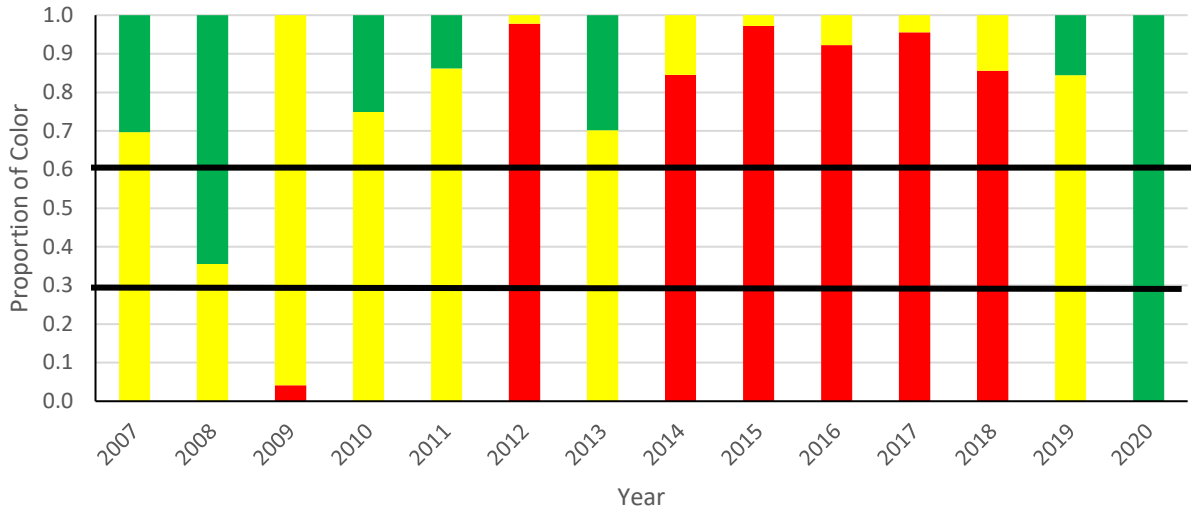


Figure 20. Annual color proportion from TLA for adult (age 1+) spot from the Mid-Atlantic NEAMAP survey using a 2007-2019 reference period.



6.2 Composite TLA Characteristic for Mid-Atlantic including NEAMAP

In order to generate the composite TLA index that included NEAMAP in the Mid-Atlantic, the other Mid-Atlantic indices (NEFSC, ChesMMAP, and MD Seine Survey) had to be recalculated using the common time period of all three surveys (2007-2019) in order to have a common reference. Since the ChesMMAP survey was not available for 2019-2020, the juvenile composite TLA (age 0) is presented using only NEAMAP and the MD juvenile fish seine survey. Since ChesMMAP for adults (age 1+) in 2019-2020 and NEFSC was not available in 2020 the TLA

presented only goes through 2019 and is the composite TLA using NEFSC and NEAMAP only (as this was the data available).

- The juvenile spot composite characteristic (Figure 21) supported the general decline in recruitment in the Mid-Atlantic region with red proportions in excess of the 60% threshold from 2013 through 2019. The increase in the MD index in 2020 put the composite TLA below the 30% threshold for the first time since 2012.
- The adult spot composite characteristic (Figure 22) showed a similar overall low abundance trends from 2012, with red proportions above the 30% threshold from in all but two years and exceeding the 60% threshold three years. 2019 was the first year the TLA dropped below the 30% threshold since 2013.
- Both the juvenile and adult indices tripped in the terminal years presented for each TLA (2020 for juveniles and 2019 for adults) since two of the three terminal years exceeded the 30% threshold.

6.3 Summary

The addition of the NEAMAP survey generally supported the declining trends in recent years seen in the harvest composite characteristic as well as the fishery-independent surveys (with the exception of the NEFSC survey). The TC might consider adding the NEAMAP survey to the Traffic Light Analysis after the next scheduled benchmark assessment for spot and re-evaluate the use of the NEFSC survey for use in the TLA. The impact of COVID-19 in 2020 on the different fishery independent surveys and the availability of the fully calibrated ChesMMAP index also makes it a good idea to wait on considering changes to the TLA until report year 2022.

Figure 21. Juvenile spot (age 0) TLA composite characteristic index for the Mid-Atlantic (NJ-VA) using NEAMAP and MD Seine surveys with a 2007-2019 reference period.

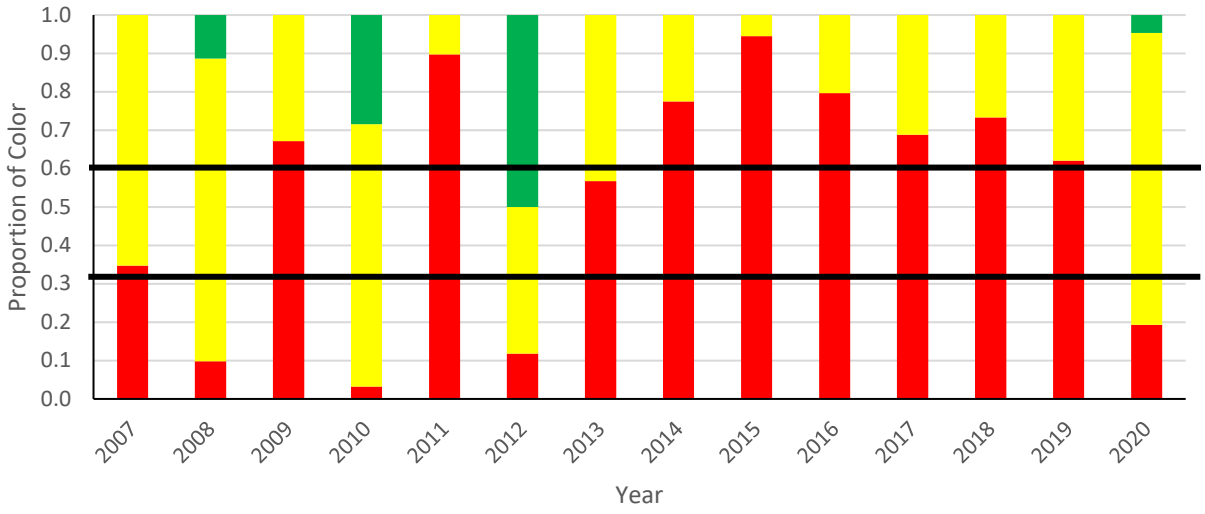
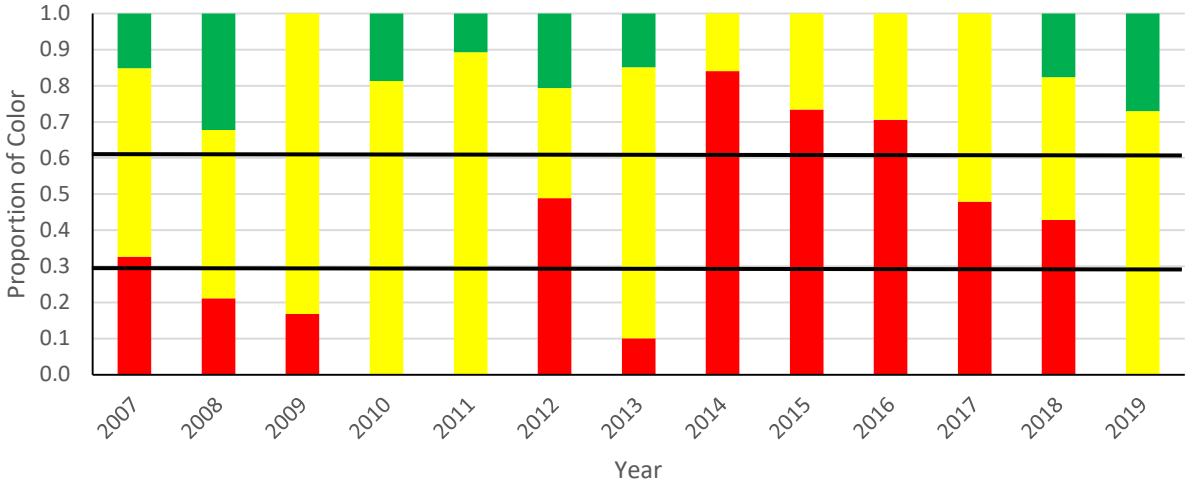


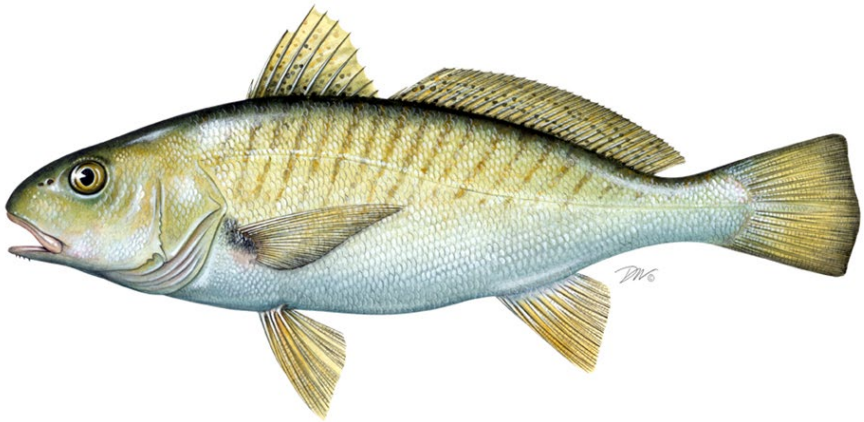
Figure 22. Adult spot (age 1+) TLA composite characteristic index for Mid-Atlantic (NJ-VA) using NEFSC and NEAMAP surveys with a 2007-2019 reference period.



ATLANTIC STATES MARINE FISHERIES COMMISSION

2021 TRAFFIC LIGHT ANALYSIS REPORT FOR ATLANTIC CROAKER (*Micropogonias undulatus)*

2020 Fishing Year



Prepared by the Technical Committee
Drafted June 2021

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

EXECUTIVE SUMMARY

Background

The purpose of this report is to evaluate the current status of Atlantic croaker using the annual Traffic Light Analysis (TLA). Atlantic croaker is managed under Addendum III (2020) which outlines the population characteristics evaluated, management triggers, and management responses. Annually, the TLA evaluates a Mid-Atlantic and a South Atlantic harvest metric, which is a combination of commercial and recreational landings in the region. It also evaluates a Mid-Atlantic and South Atlantic abundance metric, which is a combination of indices of abundance from fishery-independent surveys in each region. Each metric is evaluated using a color proportion of green, yellow, or red based on comparing that year to a 2002-2012 reference period. Addendum III defined 30% red threshold as a moderate concern and 60% red threshold 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 are exceeded for either region in any three of the four terminal years.

Impact of COVID on Data Availability

The TLA uses commercial and recreational harvest, both of which were available for 2020, although the pandemic impacted harvest and monitoring programs. The Mid-Atlantic abundance index is based on the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) which was not available for 2020 due to lack of calibration factors and the Northeast Fishery Science Center (NEFSC) Multispecies Bottom Trawl Survey which did not sample in 2020. The South Atlantic abundance index is based on the South Carolina Department of Natural Resources (SCDNR) Trammel Net Survey which was available in 2020 and Southeast Area Monitoring and Assessment Program (SEAMAP) which did not sample in 2020. Therefore, the harvest metric was calculated in 2020 for both regions, but both the Mid-Atlantic and South Atlantic abundance metrics are incomplete for 2020.

2020 Harvest Metrics

The Mid-Atlantic harvest metric has triggered at 60% red threshold in three of the four terminal years (2018-2020) and the South Atlantic harvest metric has triggered at 30% red threshold in all four terminal years (2017-2020). This is the second consecutive year the harvest metric in both region has triggered at least at the 30% threshold.

2020 Abundance Metrics

While the abundance metrics could not be calculated due to missing 2020 data, Addendum III specifies TLA trigger based on the four terminal years so assumptions can still be made regarding abundance. For the Mid-Atlantic, two of the four terminal years triggered at 30% red (2017-2018) while two of the four are unknown (2019-2020). This metric did trigger at the 30% threshold during the 2019 TLA. For the South Atlantic, three of the four terminal years (2017-2019) did not trigger at any level and therefore the 2020 data would not change status regardless of its value.

Conclusions

The harvest triggered in both the Mid-Atlantic (60% threshold) and South Atlantic (30% threshold) in 2020 indicating continued concern. The abundance did not trigger at any level for the South Atlantic and although the last two years are undetermined for the Mid-Atlantic due to missing 2020 data, the two years that are available are below the 60% threshold. Regardless, the previous TLA indicated that the Mid-Atlantic triggered at 30%. Addendum III requires management action taken in 2021 to remain in place for a minimum of three years (through and including the 2023 season). The Atlantic croaker remains triggered at the 30% threshold and the TC recommends maintaining management enacted in 2021.

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). The Amendment does not require any specific measures restricting harvest but encourages states with conservative measures to maintain them. It also implemented a set of management triggers, based on an annual review of certain metrics, to respond to changes in the fishery or resource, and initiate a formal stock assessment on an accelerated timeline if necessary. Addendum I revised the management program's biological reference points to assess stock condition on a coastwide basis as recommended by the 2010 stock assessment.

In August 2014, the South Atlantic State/Federal Fisheries Management Board (SAB) approved Addendum II to Amendment I to the Atlantic Croaker Fishery Management Plan (FMP). The Addendum established the Traffic Light Approach (or TLA) to evaluate fisheries trends and develop state-specific management actions (i.e., bag limits, size restrictions, time and area closures, and gear restrictions) when harvest and abundance thresholds are exceeded. Addendum II established the TLA as a precautionary management framework to evaluate fishery trends and develop management actions. Starting in the late 2000s, there were inconsistent signals in the data used to examine the resource. The lack of clear information from the TLA and the assessment made it difficult to provide management advice.

The most recent benchmark stock assessment for Atlantic croaker was completed in 2017 and provided more data for further refinement and modification of the existing TLA, as recommended by the Atlantic Croaker Technical Committee (TC). In addition, the 2017 stock assessment was not recommended for management use. In February of 2020, the SAB approved Addendum III to Amendment I allowing modification of the TLA to use a regional approach as well as establishing management actions to be taken if the TLA triggers were tripped. Addendum III addressed several issues by modifying the TLA to better reflect stock characteristics and identifying achievable management actions based on stock conditions.

The TLA is a statistically-robust 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. As such, its serves as an excellent management tool for Atlantic croaker. 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). For example, as

harvest or abundance increase relative to their long-term mean, the proportion of green in a given year will increase, and as harvest or abundance decrease, the amount of red in that year becomes more predominant. Under Addendum II, state-specific management action would be initiated when the proportion of red exceeds specified thresholds (30% or 60%), for both harvest and abundance, over three consecutive years. The thresholds were maintained in Addendum III but the trigger mechanism was changed as described below.

Addendum III incorporated the following changes into the TLA:

1. Incorporation of 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 to the currently used indices from the Northeast Fishery Science Center (NEFSC) Multispecies Bottom Trawl Survey and Southeast Area Monitoring and Assessment Program (SEAMAP).

2. Use of revised adult abundance indices from the surveys mentioned above, in which age-length keys and length composition information are used to estimate the number of adult (age 2+) individuals caught by each survey.

3. Use of regional metrics to characterize the fisheries north and south of the Virginia-North Carolina state border. The ChesMMAP and NEFSC surveys will be used to characterize abundance north of the border, and the SCDNR Trammel Net and SEAMAP surveys will be used to characterize abundance south of the border.

4. Change/establish the reference time period for all surveys to be 2002-2012.

5. Change the triggering mechanism to the following: Management action will be triggered according to the current 30% red and 60% red thresholds if both the abundance and harvest thresholds are exceeded in either region in any three of the four terminal years.

Addendum III retained the TC's ability to alter the TLA as needed to best represent trends in Atlantic croaker harvest and abundance, including selection of surveys and methods to analyze and evaluate these data. Such changes may be made without an addendum, but Addendum III was necessary because of the change to the management-triggering mechanism.

From the 2020 TLA report, Atlantic croaker had red proportions that exceeded the threshold of 30% in both metrics in the Mid-Atlantic. The South Atlantic region harvest metric triggered 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 a recreational bag limit of no more than 50 Atlantic croaker per person per day. States with more restrictive measures in place were encouraged to maintain those measures. For commercial fisheries, states had to set a regulation that, if applied to the state's 2010-2019 average

commercial harvest, would have produced at least a 1% reduction. States established different measures by trip limits or season modifications, as long as measures implemented were quantifiable and are projected to achieve this 1% reduction. All states have submitted state implementation plans to meet the required recreational and commercial management measures. Management measures were initiated in 2021 and are required to remain in place for three years, through 2023.

The COVID-19 pandemic had far reaching impacts on almost all state and federal fishery independent monitoring programs at some point during 2020. These impacts ranged from short term interruptions in sampling (on the scale of weeks or a month or two) to complete shutdown for the year due to social distancing requirements on research vessels. The social distancing requirements made it impossible for programs to work in enclosed spaces and close quarters for both daily sampling as well as extended at-sea work requiring days and weeks to complete. For the TLA, the impact was felt most significantly for the larger scale regional monitoring surveys (NEFSC groundfish survey and the SEAMAP survey) which were not able sample at all in 2020. Additionally, the ChesMMAP survey has not completed the calibration estimates for converting the index for use over the entire time series due to the vessel and gear change that occurred in 2019. ChesMMAP anticipates having the calibration estimates completed in 2022. NEFSC and SEAMAP data will be available for 2021, and future TLAs will be able to utilize the most recent years (2019-2021) of the data series beginning with the 2021 fishing year TLA report.

The COVID-19 pandemic also had far reaching impacts economically on both the recreational and commercial industries. While both **commercial and recreational harvest** datasets were available for 2020, there are caveats for the 2020 fishing year harvest metric. The component of the Marine Recreational Information Program (MRIP) that samples dockside catch rate data (Access Point Angler Intercept Survey - APAIS) was interrupted by the pandemic. Due to this interruption, catch rate data were imputed as needed from 2018 and 2019 to generate total catch estimates in 2020. The contribution of imputed data for Atlantic croaker harvest estimates by state ranged from 0-70% (Table 1). The impact of imputed data on total catch estimates is unknown. Closures and disruptions to the charter and headboat industry may have also have impacted the recreational harvest metric. Fishery performance, markets, and effort throughout the year due to the pandemic impacted the commercial fleet. While data availability was maintained, the impact of the pandemic on the accuracy harvest metrics must be considered.

Table 1. Contribution of imputed harvest rate data from 2018 and 2019 for 2020 MRIP harvest estimates of Atlantic croaker.

State	2020 Harvest (A+B1) Total Weight (lb)	PSE	Contribution of Imputed Data to Total Harvest Rate
NEW JERSEY	16,358	60.6	70%
DELAWARE	21,870	26.8	33%
MARYLAND	91,047	36.9	0%
VIRGINIA	2,410,612	20.2	50%
NORTH CAROLINA	223,685	20.6	21%
SOUTH CAROLINA	230,205	19.1	2%
GEORGIA	77,876	41.4	13%
FLORIDA	1,072,714	27.5	3%

2 TRAFFIC LIGHT ANALYSIS (COMPOSITE INDEXES)

2.1 Harvest Composite Index

• The harvest composite TLA index for the Mid-Atlantic indicates that the management response trigger would have been tripped at the 60% threshold in 2020 (Figure 1).

• The mean red proportion for the most recent three year time period (2018-2020) in the Mid-Atlantic was 73.3% with the red proportion being above 60% since 2018 which indicates a significant level of concern (Figure 1).

• The harvest composite TLA index for the South Atlantic also triggered in 2020 at the 30% threshold and represented the seventh consecutive year above 30% (Figure 2).

• The mean red proportion in the South Atlantic region for 2018-2020 was 46.9% (Figure 2).

• The important trend to point out in both regions is the continuing decline in recreational and commercial landings for Atlantic croaker with TLA red proportions now exceeding 60% for commercial landings.

Figure 1. Annual color proportions for the harvest composite TLA of Mid-Atlantic (NJ-VA) Atlantic croaker recreational and commercial landings

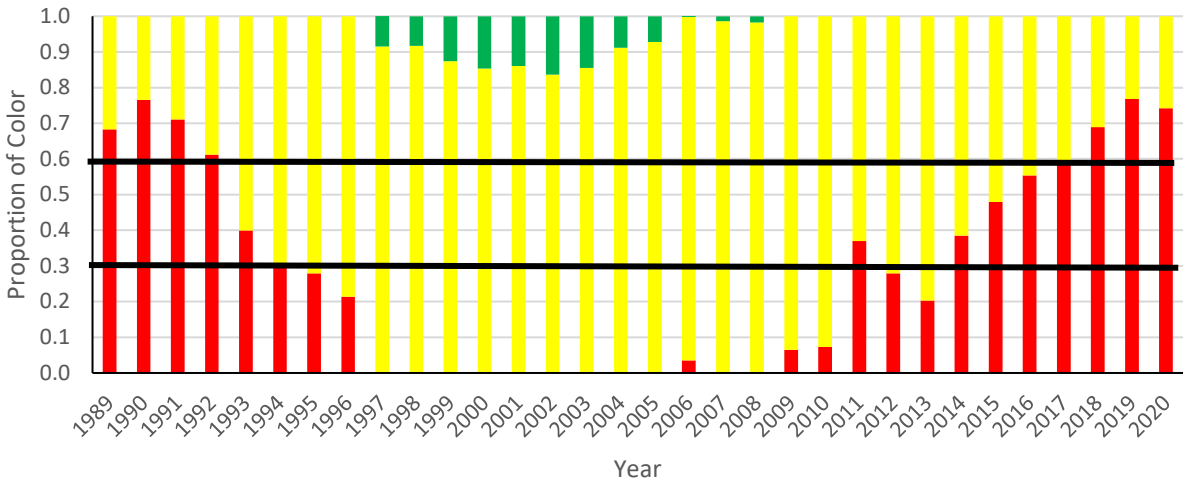
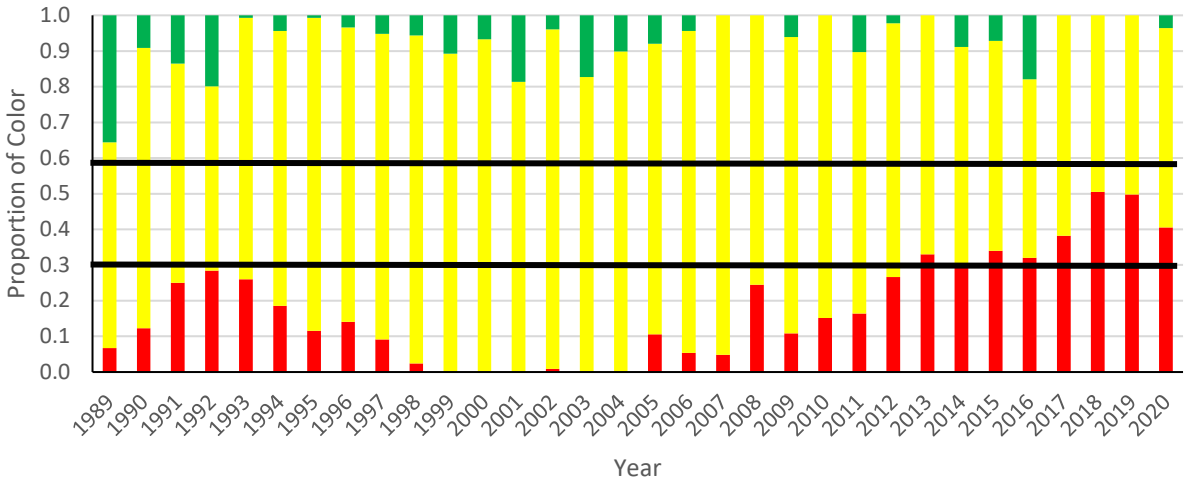


Figure 2. Annual color proportions for the harvest composite TLA of South Atlantic (NC-FL) Atlantic croaker recreational and commercial landings using a 2002-2012 reference period



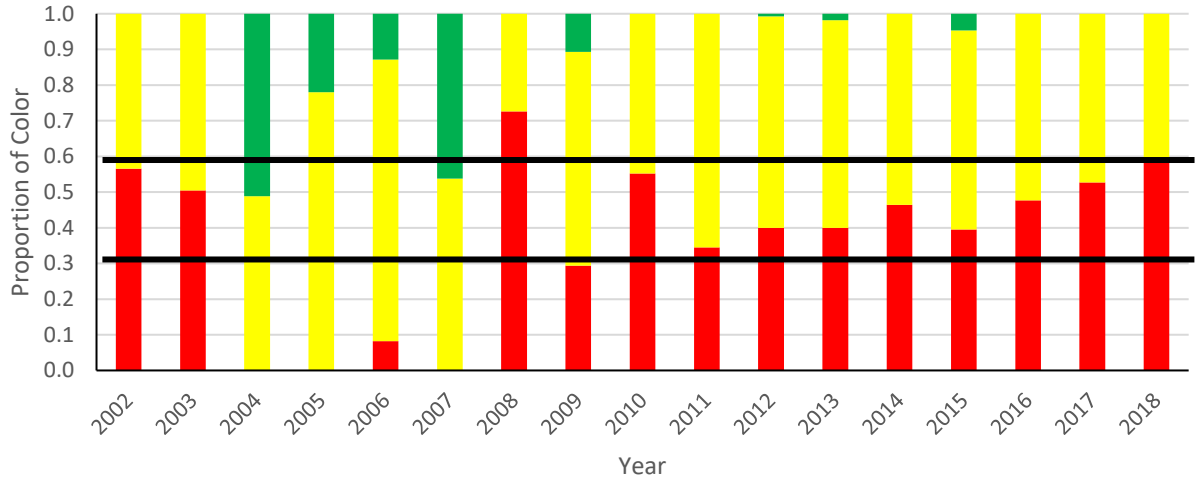
2.2 Abundance Composite Characteristic Indexes

The abundance composite TLA index in each region was broken into two components based on age composition, including an adult index and a juvenile index. Only adult abundance is used to determine if management action is triggered. Juvenile data is presented as supplementary information only (Section 5). The adult composite index was generated from the NEFSC and ChesMMAP surveys for the Mid-Atlantic and SEAMAP and SCDNR trammel net survey in the South Atlantic, since the majority of Atlantic croaker captured in these surveys were ages 2+.

The juvenile composite index in the Mid-Atlantic was generated from the ChesMMAP and VIMS surveys, because VIMS is a juvenile survey and ChesMMAP has an age specific index for ages 0-1. The juvenile composite index in the South Atlantic was generated from the NCDMF Pamlico Sound Survey (Program 195) because the survey encounters age-0 croaker. As stated above, the COVID-19 pandemic in 2020 made survey work impossible for the NEFSC survey and the ChesMMAP survey does not have the updated calibrations to use the entire time series.

- The adult composite TLA characteristic for the Mid-Atlantic (Figure 3) showed a trend of increasing red proportions over the last five years, although the index has not been calculated since 2018 due to unavailable data from ChesMMAP
- The composite index (Figure 3) has been above the 30% threshold since 2010 (only available through 2018 since there was no 2019-2020 values for ChesMMAP.

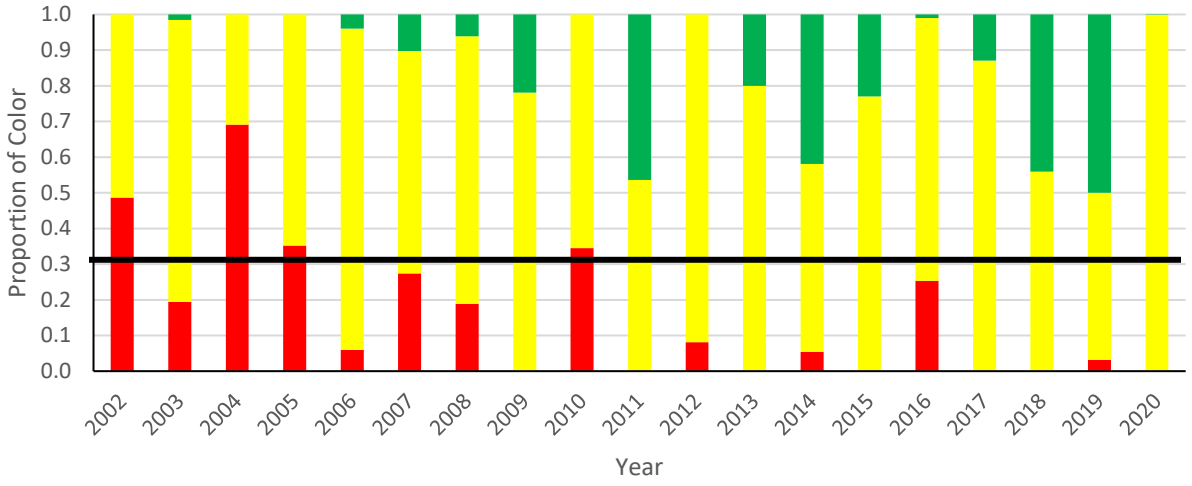
Figure 3. Adult (age 2+) Atlantic croaker TLA composite characteristic index for the Mid-Atlantic (NEFSC and ChesMMAP surveys)



The harvest composite characteristic triggered in the Mid-Atlantic in 2020, but the lack of index data for the fishery independent composite characteristic did not allow the Mid-Atlantic TLA to be updated for 2020. However, if the downward trend in the TLA continued, then the independent composite would have likely triggered in 2020. The continued declining trend is cause for concern in the Mid-Atlantic region. The continued declining trend in the juvenile composite does not bode well for changes in the adult population if recruitment continues to decline.

- The adult composite TLA index for the South Atlantic did not trigger any management response in 2020 for the South Atlantic region.

Figure 4. Adult (age 2+) Atlantic croaker TLA composite characteristic index for the South Atlantic (SEAMAP and SCDNR trammel survey)



3 SUMMARY

The harvest composite TLA characteristic remained above triggered thresholds in both the Mid-Atlantic (60% threshold) and South Atlantic (30% threshold) in 2020 indicating continued concern. The continued declining trend in the commercial and recreational harvests for the Atlantic coast is a concern since the decline has become greater in the last two years, but further management measures can only be triggered based on the abundance composites. The lack of enough indices to run a mid-Atlantic TLA for the fishery independent composite in the current form (NEFSC and ChesMMAP) made 2020 difficult to monitor. Even though the South Atlantic fishery independent indices still remained below the trigger threshold, management measures triggered in 2020 as a result of addendum III will remain in place until at least 2023. The lack of 2020 survey data to inform composite indices may impact future management triggers if the stock continues to decline, as seen in available indices. Table 2 provides an overview of the past four years of trigger thresholds for each region, as well as the current TLA status. The adult abundance indices currently have an unknown status; as discussed above, ChesMMAP will be available in the future once calibration factors are developed.

Table 2. Traffic light metrics for the Mid- and South Atlantic regions with known and unknown values, given missing 2020 data. Management action is triggered according to the current 30% red and 60% red thresholds if both the adult abundance and harvest thresholds are exceeded in any three of the four terminal years within either region.

TLA Metric	Atlantic Croaker			
	2017	2018	2019	2020
Mid-Atlantic Harvest	59% red	69% red	77% red	74% red
South Atlantic Harvest	38% red	51% red	50% red	41% red
Mid-Atlantic Adult Index	53% red	58% red	Unknown	Unknown
South Atlantic Adult Index	13% green	44% green	50% green	Unknown; cannot trigger at 30% or 60% regardless of 2020 data
2021 TLA Status	Likely still triggered at 30% (Mid-Atl Harvest triggered at 60%; S. Atl Harvest triggered at 30%; Mid-Atl Index unknown; S. Atl Index did not trigger)			

4 TRAFFIC LIGHT ANALYSIS (FISHERY DEPENDENT)

4.1 Commercial Landings

4.1.1 Mid-Atlantic

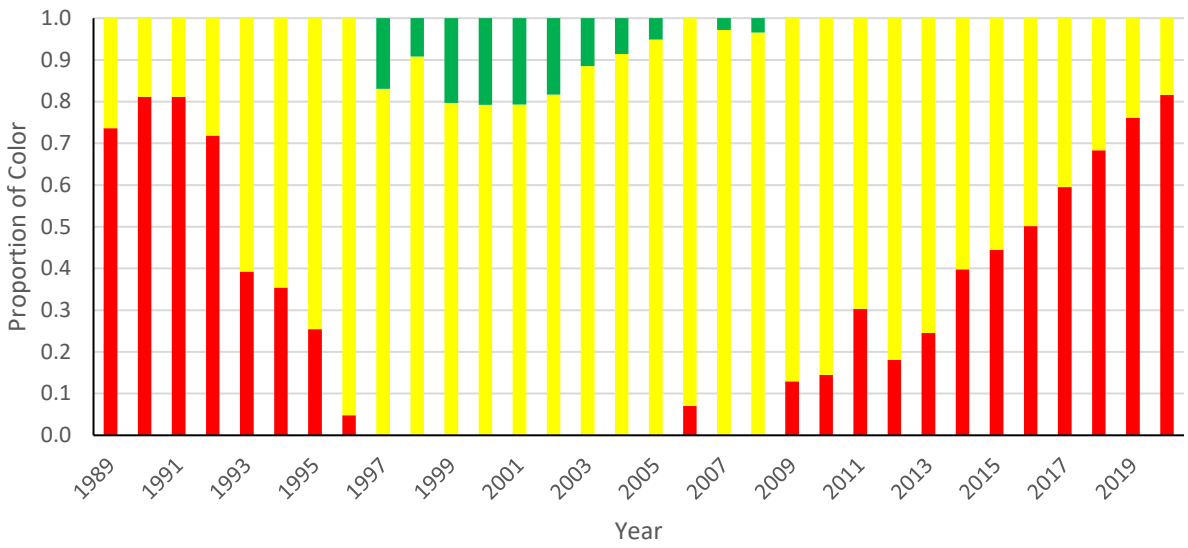
• Commercial landings in the Mid-Atlantic declined 83.1% in 2020 (65.2 metric tons) from 2019 (385.9 metric tons) and represented the 15th year of decline in commercial croaker landings (Figure 5).

• The TLA for commercial landings has been above the 30% threshold every year since 2011 (Figure 5) and 2020 was the 7th year in a row where landings were above the 30% threshold.

• More concerning is that the red proportion has been above the 60% red threshold for the last three years of the series (2018-2020) and was only just under 60% in 2017 (59.5%).

• The three year mean red proportion for croaker has exceeded 30% since 2010 and exceeded 60% in 2020. The continued steady decline in croaker landings in recent years represent some of the lowest landings levels in the time series.

Figure 5. Annual TLA color proportions for Atlantic croaker commercial landings for the Mid-Atlantic (NJ-VA) coast of the US



4.1.2 South Atlantic

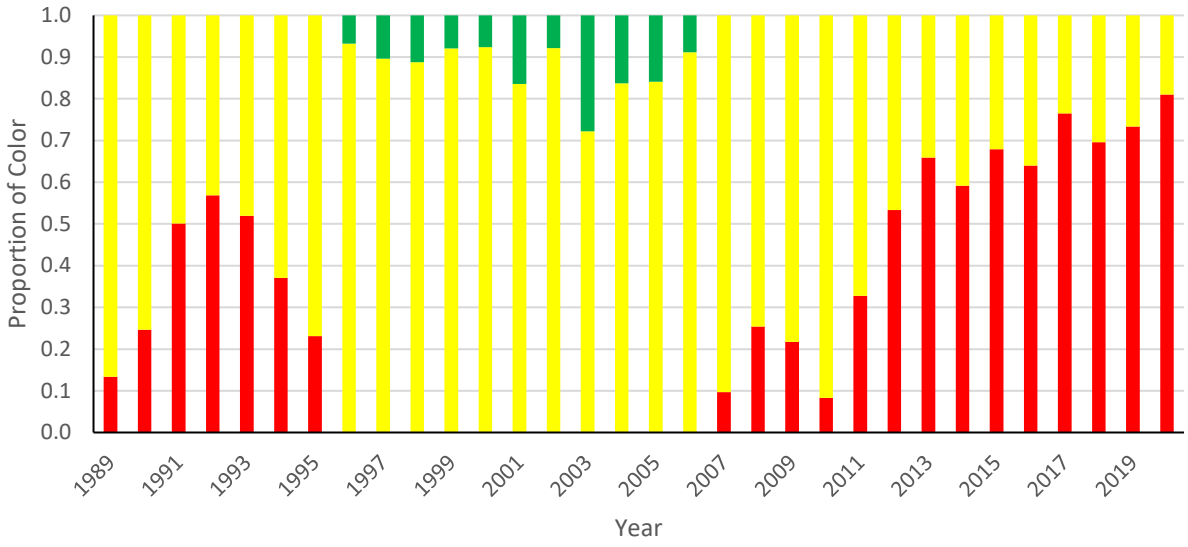
- Commercial landings in the South Atlantic declined 53.0% in 2020 (290.4 metric tons) from 2019 (618.1 metric tons) and represented the 13th year of decline in commercial croaker landings in the South Atlantic (Figure 6).

- The TLA for commercial landings in the South Atlantic has been above the 30% threshold every year since 2011 (Figure 6) and 2020 was the 10th year in a row where landings were above the 30% threshold.

- More concerning is that the red proportion has been above the 60% red threshold for seven of the past eight years of the series (2013-2020) and was only just under 60% in 2014 (59.1%).

- The three year mean red proportion for croaker has exceeded 30% since 2010 and exceeded 60% for the past six years. The continued steady decline in croaker landings in recent years represent some of the lowest landings levels in the time series.

Figure 6. Annual TLA color proportions for Atlantic croaker commercial landings for the South Atlantic (NC-FL) coast of the US



4.2 Commercial Discards

4.2.1 South Atlantic

- Discard estimates of Atlantic croaker in the South Atlantic Shrimp Trawl Fishery are informed by catch rates observed during the SEAMAP Coastal Trawl 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.
- Total effort (net hours) in the South Atlantic Shrimp Trawl Fishery declined from a time series high in 1991 to a time series low in 2005 (Figure 7). Effort then varied around an increasing trend through 2017 and was variable and lower through 2020.
- Total discards of Atlantic croaker in the South Atlantic Shrimp Trawl Fishery were high during the late 1980s and early 1990s, declined to relatively low levels in the early to mid-2000s, and then increased to levels similar to the beginning of the time series during the 2010s (Figure 7). Discards during the final three years of the time series were the highest since 1995.
- There were no SEAMAP Coastal Trawl Survey tows conducted in 2020, so the trend for the 2020 discard estimate relative to previous years is solely informed by South Atlantic Shrimp Trawl Fishery Observer catch rates. Further, there was reduced observer coverage of shrimp trawl fisheries during 2020. Sampling occurred January-March and August-November at levels similar to prior years which includes months in both seasons (off-season and peak-season) used as a factor in the model to estimate catch rates, but there was no observer coverage from April-July. The observer catch rates of Atlantic croaker over the reduced sampling season in 2020 increased relative to 2019 catch rates

using both full observer coverage and SEAMAP tows, and this trend was likely influenced by the lack of SEAMAP tows and reduced observer coverage. Figure 8 shows how the trends in catch rates track in years prior to 2020. As in all years, the magnitude of the 2020 discard estimate is informed by the observer data (magnitude of catch rates) and shrimp trawl effort data (expansion factor to expand catch rates to total discards), so the magnitude of catch rates was likely also impacted by reduced observer coverage.

- For additional information on the South Atlantic Shrimp Trawl Fishery discard estimation, please see Appendix 1 of the 2020 TLA Update Report.

Figure 7. Total net hours fished (left) and discards of Atlantic croaker (right) in the South Atlantic Shrimp Trawl Fishery.

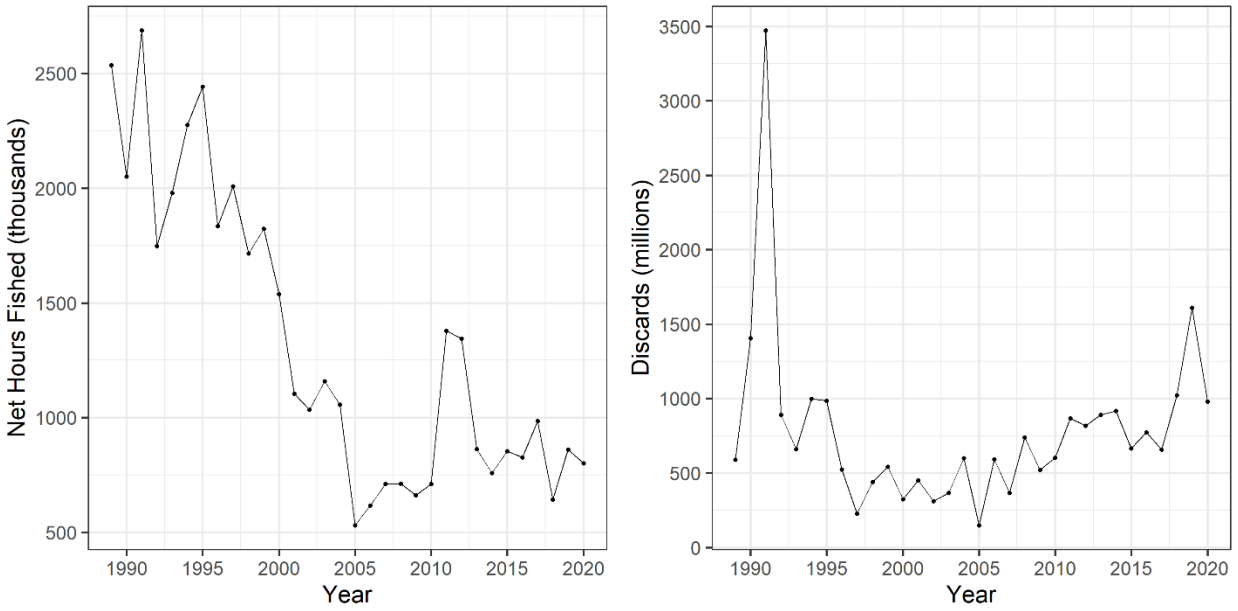
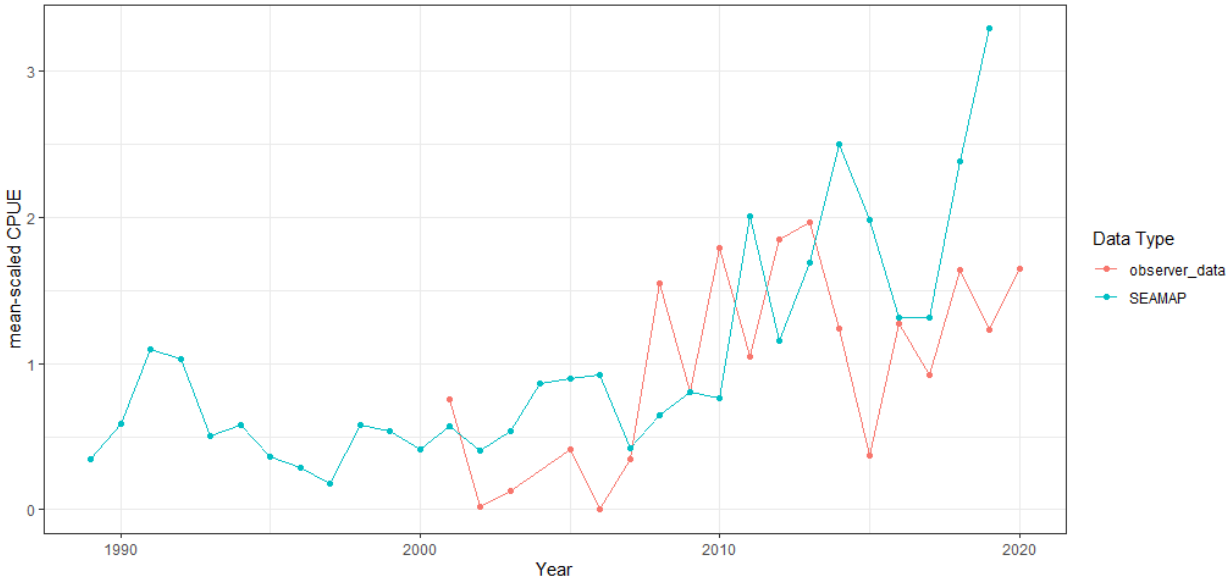


Figure 8. Comparison of Atlantic croaker mean-scaled catch-per-unit-effort from SEAMAP Coastal Trawl Survey data and South Atlantic Shrimp Trawl Fishery Observer data.



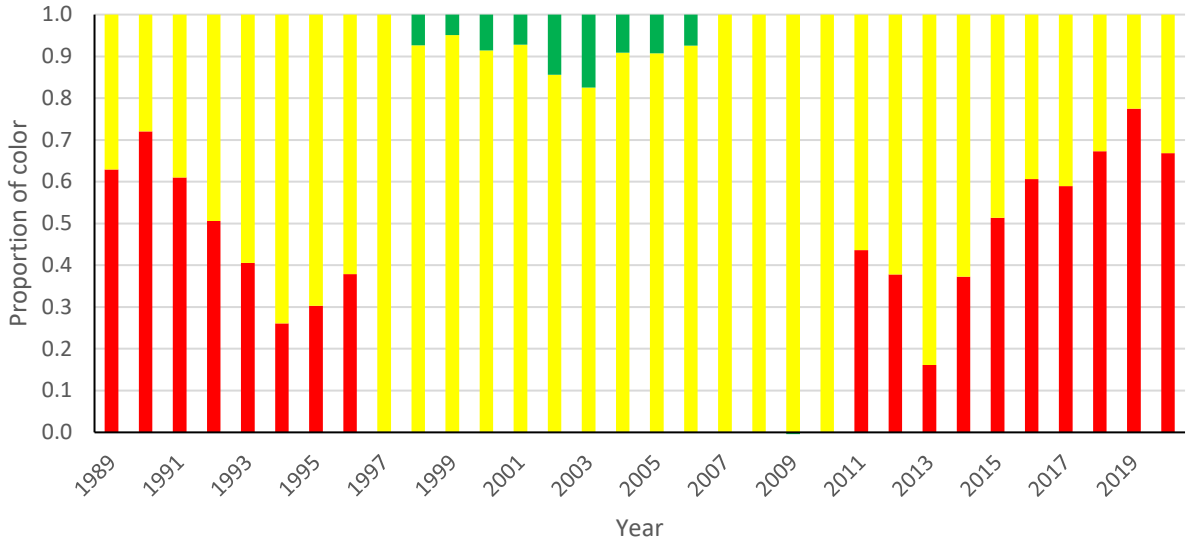
4.3 Recreational Harvest

In July 2018, the Marine Recreational Information Program transitioned from the catch estimates based on effort information from the Coastal Household Telephone Survey (CHTS) to effort information from the mail-based Fishing Effort Survey (FES). FES estimates are used in this and future reports, so recreational estimates and analyses may be different from previous years that used CHTS estimates. See the Introduction section for a detailed discussion on impacts from COVID-19 on recreational harvest data.

4.3.1 Mid-Atlantic

- The recreational harvest increased in 2020, up 144% (1,142.7 metric tons) from 2019 (468.2 metric tons).
- While the increase in recreational harvest in 2020 was significant, the recreational harvest level in 2019 was the lowest annual harvest in the entire time series (1981-2020) for the Mid-Atlantic.
- The proportion of red in the TLA was 66.8% in 2020 decreasing from 77.5% in 2019 (Figure 9), indicating the recreational index has reached trigger levels at the 30% level since 2014 and has been above the 60% level for the last three years..
- As with commercial landings, the continued decline in harvest levels for Atlantic croaker in the recreational fishery are also cause for concern.

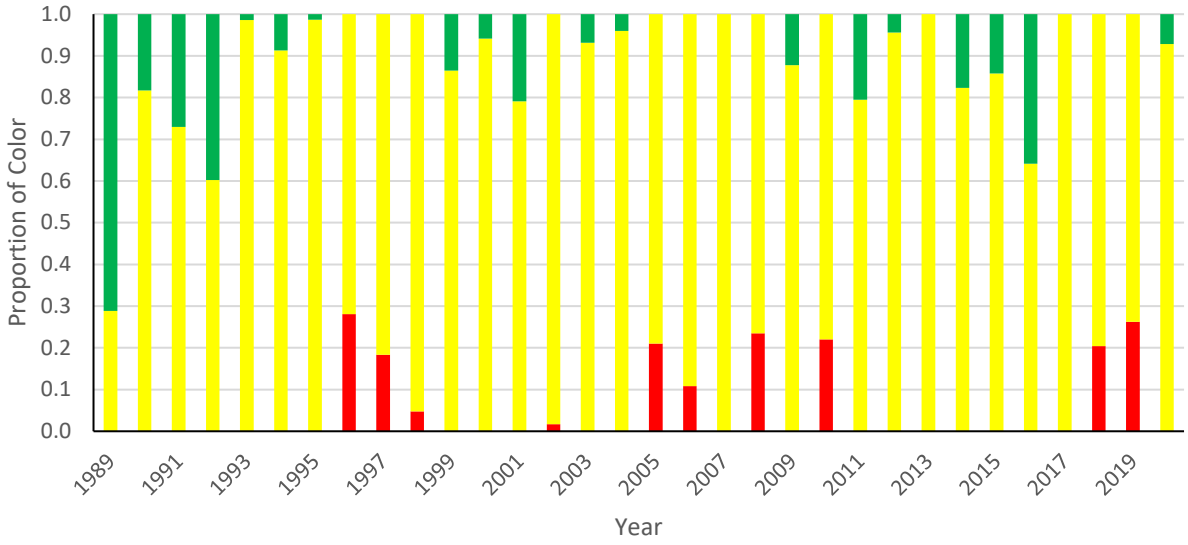
Figure 9. Annual TLA color proportions for Atlantic croaker from the Mid-Atlantic (NJ-VA) coast recreational harvest of the U.S. based on a 2002-2012 reference period



4.3.2 South Atlantic

- The recreational harvest index for the South Atlantic increased 76.5% in 2020 to 758.1 metric tons from 429.5 metric tons in 2019.
- This was the first increase in recreational landings in the South Atlantic in the past two years with no red proportion in 2020 (Figure 10).

Figure 10. Annual TLA color proportions for Atlantic croaker for the South Atlantic (NC-FL) recreational harvest of the U.S. based on a 2002-2012 reference period



5 TRAFFIC LIGHT ANALYSIS (FISHERY-INDEPENDENT SURVEYS)

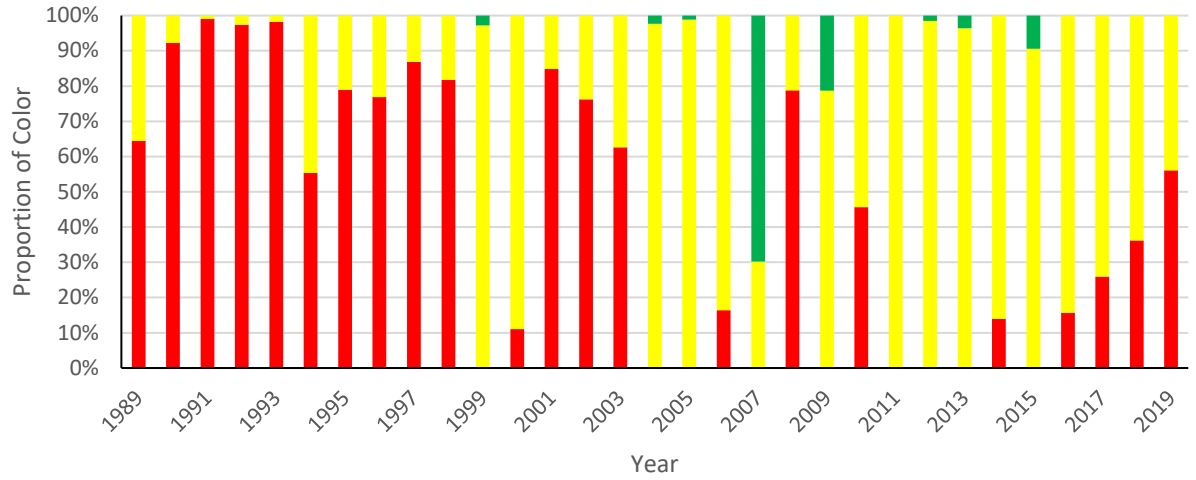
**Important note:

The ChesMMAP survey has not completed the calibrations necessary to convert the 2019 and 2020 index values that would allow full use of the entire time series after the vessel and gear changes that occurred in 2019 (see Section 3.2). ChesMMAP was able to sample in 2020, so once calibration exercises are complete the index data should be available in 2022. As discussed in the Introduction, the NEFSC fall groundfish survey and SEAMAP are only presented through 2019 due to impacts from the pandemic, and ChesMMAP only goes through 2018 in this report.

5.1 NEFSC Fall Groundfish Survey

- The index value for 2019 was 269.8 fish per tow and represented a 31.5% decrease from 2018 (394.0 fish per tow).
- The NEFSC was not carried out in 2017 due to mechanical problems with the RV Bigelow. An imputed index for 2017 was calculated as the mean of 2015-2016 and 2018 (Figure 11).
- The index has been below the long term mean (452.7 fish per tow) for the past four years.
- The general trend for the index has been declining since the series peak in 2007.
- The red proportion of the TLA has exceeded the 30% threshold for the last two years with the 3 year red proportion average being 39.4%.

Figure 11. Annual TLA color proportions for Atlantic croaker from NEFSC ground-fish trawl survey based on 2002-2012 reference period



5.2 ChesMMAP Survey

• The ChesMMAP survey made major changes to the survey in 2019 (vessel change, gear change, altered protocols, etc.) but maintained the same sampling strata and design. Side-by-side comparison tows were made between the new and old vessels/gears and the survey is in the process of producing conversion factors by species so that historic survey index values can be compared to ongoing survey values in the future. Since the conversion factor determination won't likely be finished until the end of 2021, the ChesMMAP index is only available through 2018 for the adult and juvenile TLA composite characteristics.

• The overall declining trend in catch of Atlantic croaker was evident in both the adult (age 2+) and juvenile (ages 0-1) indices, although the adult index was higher than the juvenile index in the early years of the survey (Figure 12 and Figure 13). The series peak for juveniles occurred in 2007 and the series peak for adults occurred in 2004. Since 2008 abundances for both age groups have remained relatively low.

• The TLA reflected these trends with high proportions of red since 2008 (Figure 12 and Figure 13).

• Proportionately, the decline was slightly greater for juveniles than for adults in recent years.

Figure 12. ChesMMAP survey annual TLA color proportions for Atlantic croaker ages 0-1 using a 2002-2012 reference period

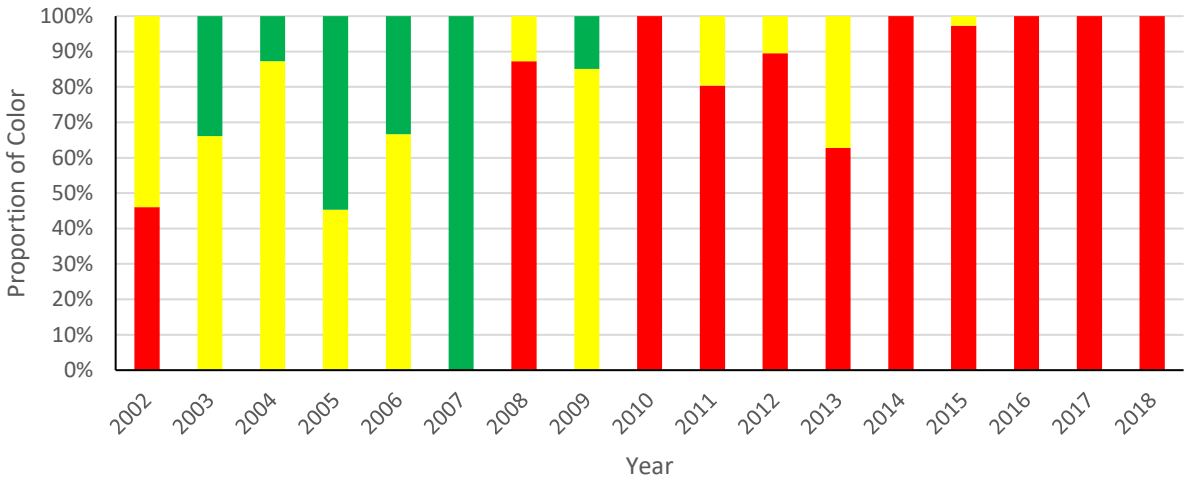
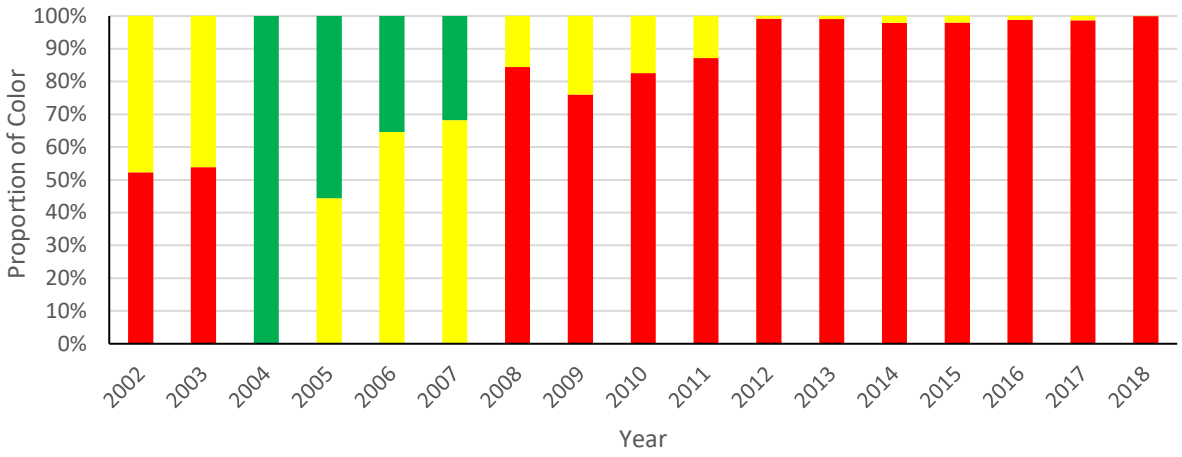


Figure 13. ChesMMAP survey annual TLA color proportions for Atlantic croaker ages 2+ using a 2002-2012 reference period



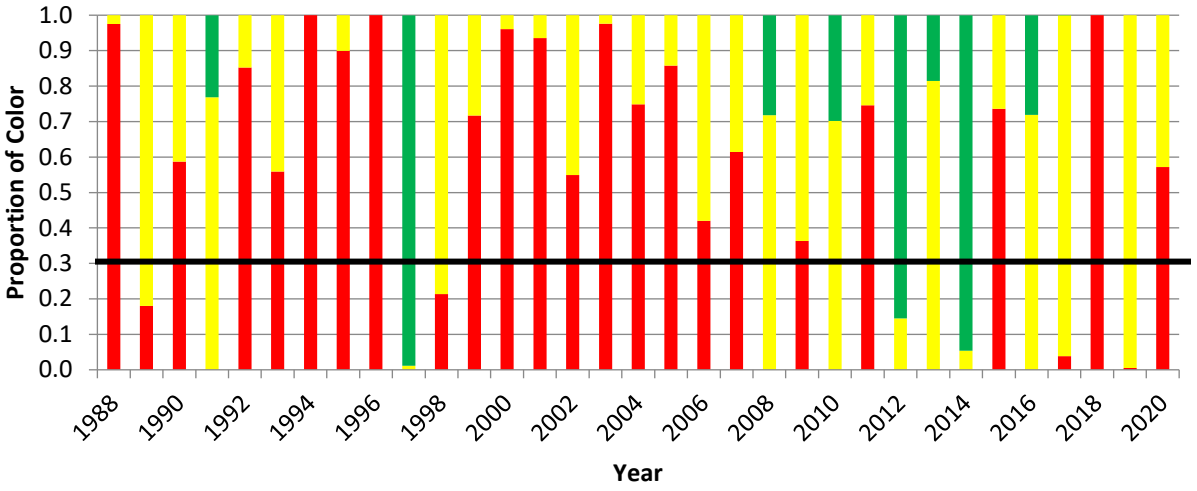
5.3 VIMS Survey

• Due to COVID-19 restrictions, no sampling occurred in April or May 2020 and June sampling was limited to Bay and York River only. However, the index was still calibrated using April - June with the limited sampling in 2020 taken into account so that the index for the entire time series could be utilized for the TLA. The VIMS juvenile trawl survey uses the relative catch levels of 1-year-old juvenile croaker as the proxy for the previous year's recruitment index.

• The VIMS index showed a decrease (54.8%) in 2020 from 2019 going from 15.6 fish per tow in 2019 to 7.05 fish per tow in 2020. High variability in the TLA color proportions was likely due to annual recruitment variations, which would not be uncommon for a juvenile index (Figure 14).

• The index value was below the long term mean in 2020 with a red proportion of 57.2%. However, the index would not have tripped the TLA trigger in 2020 since the red proportion was not above the 30% threshold for 3 of the previous 4 years.

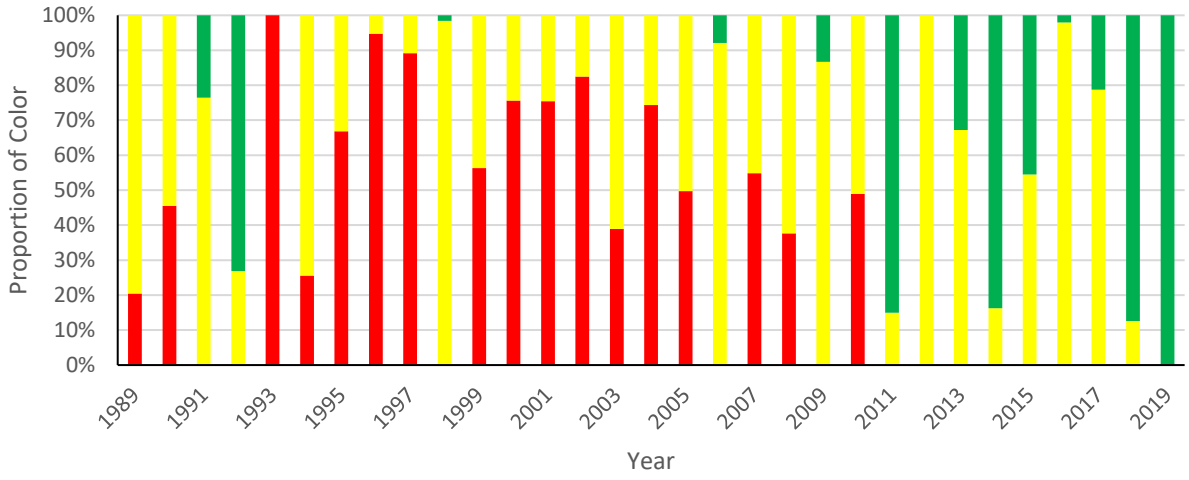
Figure 14. Annual TLA color proportions for age zero Atlantic croaker from VIMS spring trawl survey using 2002-2012 reference period



5.4 SEAMAP Survey

- The SEAMAP survey index used was for the spring season when adult Atlantic croaker (ages 2+) are captured.
- The SEAMAP index increased 12.7% in 2019 (34.7 kg/tow) from 2018 (30.7 kg/tow).
- Index values have remained above the long term mean since 2011 so there was no red in the TLA for recent years (Figure 15).
- The TLA trigger for the SEAMAP survey did not trip in 2019.

Figure 15. Traffic Light Analysis for SEAMAP catch data by weight in spring using a 2002-2012 reference period



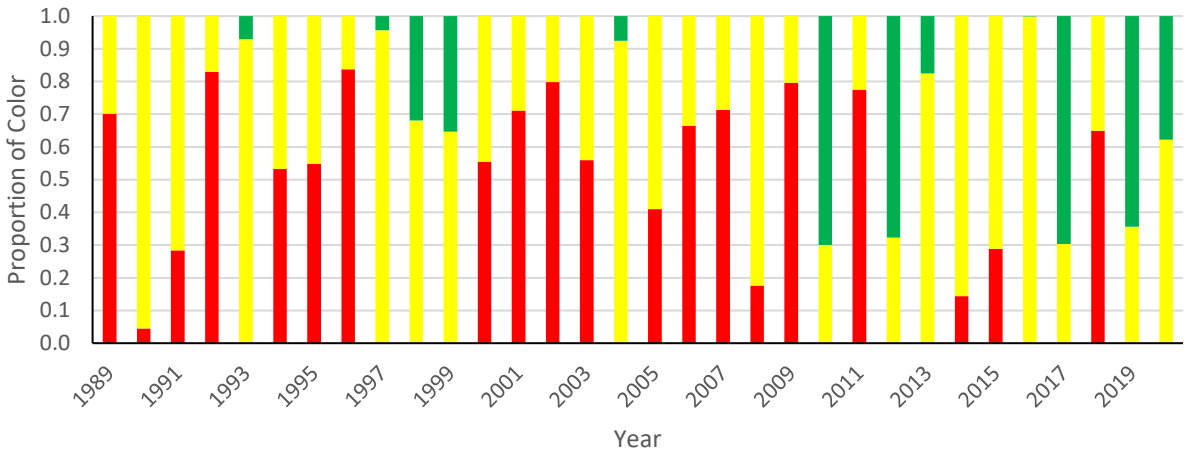
5.5 North Carolina Program 195

• The North Carolina index declined in 2020 (27.6%) to 804.3 fish/tow (versus 1,110.8 fish/tow in 2019) and was still well above the long term mean (290.3 fish per tow) resulting in a green proportion of 37.8% in the TLA (Figure 16).

• While there was a decrease in CPUE, there was still a relatively high green proportion, likely indicating recruitment remained strong in 2020.

• Note sampling during June 2020 was limited to day trips and only the sites accessible from a nearby port were sampled which primarily included the river strata (Neuse River, Pamlico River, and Pungo River) and those sites close to the mouth of the rivers. A total of 28 stations were towed during the June 2020 (54 stations are sampled each June under normal conditions).

Figure 16. NCDMF Program 195 TLA color proportions for juvenile Atlantic croaker using 2002-2012 reference period

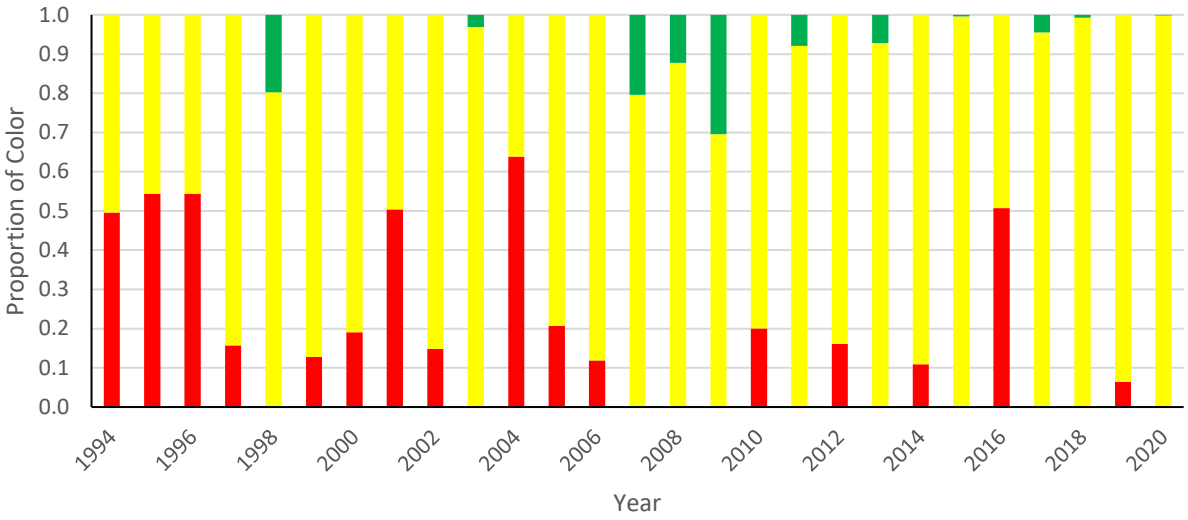


5.6 SCDNR Trammel Net Survey

• The SCDNR trammel index increased 12.9% in 2020 (1.52 fish per set) compared to 2019 (1.35 fish per set). Annual CPUE has been variably above and below the long term mean (1.34 fish per set) since 2009, indicated by annual alterations between red and green proportions in the TLA (Figure 17).

• The 2020 index value was only just above the long term mean.

Figure 17. SCDNR trammel net survey TLA color proportions for Atlantic croaker using a 2002-2012 reference period.



5.7 Juvenile Composite Indices

- The juvenile composite TLA (Figure 18) for the mid-Atlantic is only shown through 2018 since that was the latest year available for ChesMMAP. The VIMS survey was available through 2020 and is in the Fishery Independent survey section above (Section 5.3).

- The juvenile composite TLA characteristic (Figure 18) for the mid-Atlantic in 2018 was above the 60% red threshold using ChesMMAP and VIMS and was the 9th year above the 30% threshold. The Mid-Atlantic juvenile composite index likely triggered in 2019 and 2020 regardless of whether index values had been available since it met the threshold of triggering in three of the previous four years.

- The high red proportions in recent years are indicative of continued poor Atlantic croaker recruitment in the Mid-Atlantic region.

- The juvenile index for the South Atlantic TLA composite characteristic was the NC Program 195 and it did not trigger in 2020 with three of the four terminal years showing green proportions in the index (Figure 19).

Figure 18. Juvenile croaker (ages 0-1) TLA composite characteristic index for the Mid-Atlantic (ChesMMAP and VIMS through 2018)

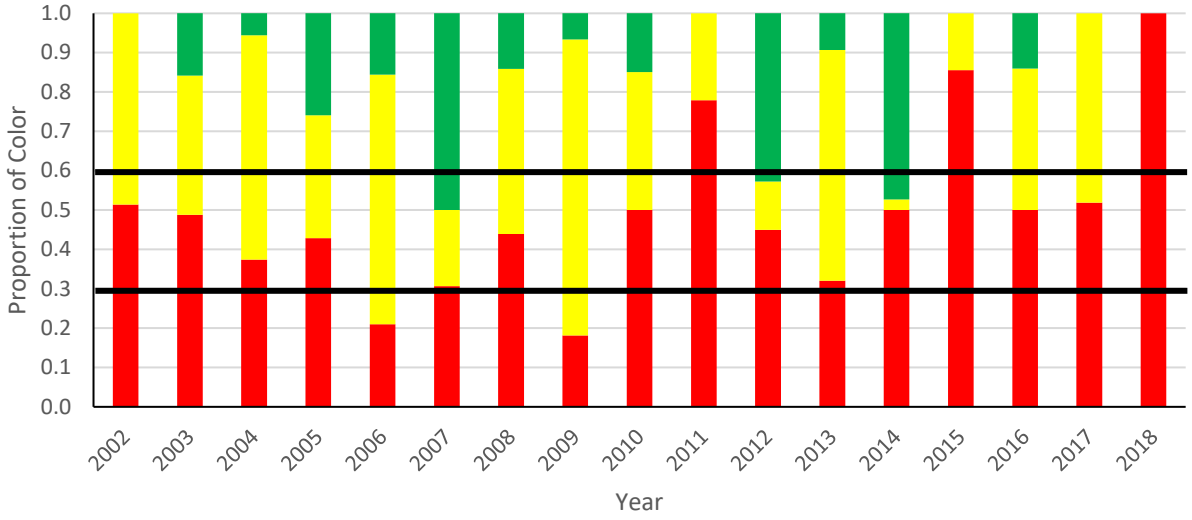
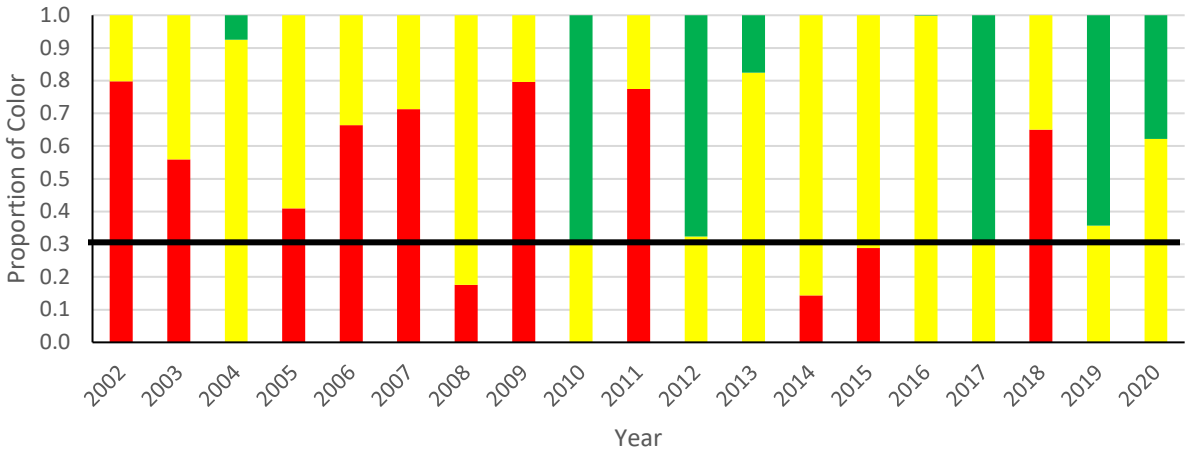


Figure 19. Juvenile (ages 0) Atlantic croaker index for the South Atlantic using NCDMF Program 195.



6 SUPPLEMENTAL MATERIAL

6.1 NEAMAP Survey

One additional survey that is available in the Mid-Atlantic is the Northeast Area Monitoring and Assessment Program (NEAMAP) which samples from Block Island Sound south to Cape Hatteras. The NEAMAP survey has been considered for use in the TLA but is currently not used due to the shorter time frame (2007-2020) compared to the other surveys. This survey may come into use with the TLA once it reaches a 15 year sampling time span, which corresponds approximately to the max life span of Atlantic croaker, but that will likely have to wait until the next stock assessment. This section describes the trends in the NEAMAP survey and gives composite characteristics that include NEAMAP.

- Juvenile recruitment has been on a declining trend since 2012 as indicated by high red proportions above the 60% threshold for the last five years (Figure 20). This trend continued in 2020 with a red proportion of 69.5%.
- This corresponds well with the decline seen in the ChesMMAP survey for juveniles in recent years as well.
- The adult Atlantic croaker index for NEAMAP also showed a declining pattern in recent years (Figure 21), although not as much of decline as that seen in the juvenile fish.
- The NEAMAP survey TLA would have triggered in 2020 for adult fish with red proportions above the 30% threshold for three of the four previous years (Figure 21). Red proportions in 2019 and 2020 exceeded the 60% threshold as well.

Figure 20. Juvenile (ages 0-1) TLA color proportions for Atlantic croaker from NEAMAP survey using a 2007-2019 reference period

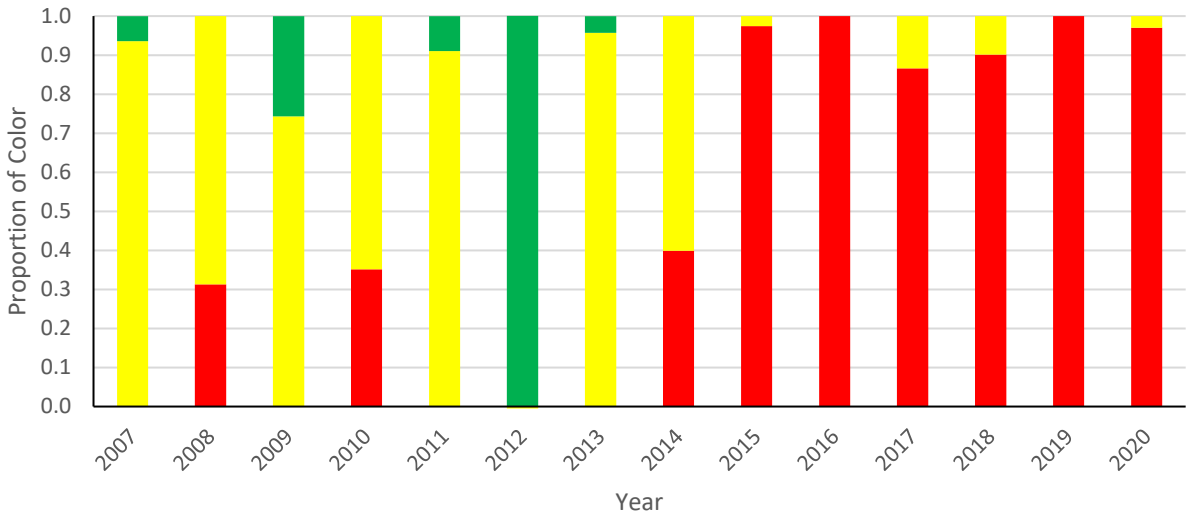
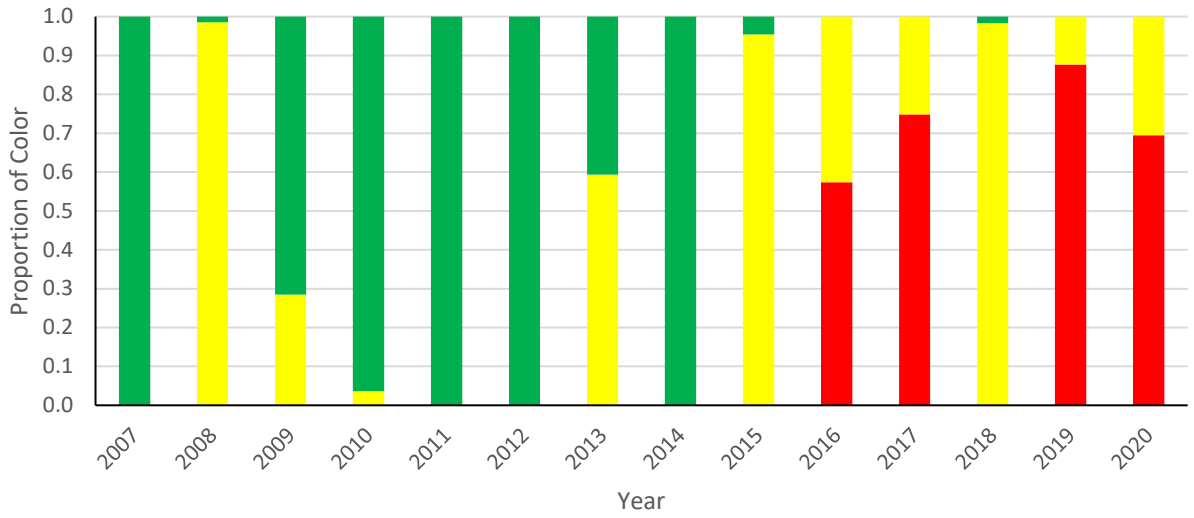


Figure 21. Adult (ages 2+) TLA color proportions for Atlantic croaker from the NEAMAP survey using a 2007-2019 reference period



6.2 Composite TLA Characteristic for Mid-Atlantic including NEAMAP

In order to generate the composite TLA index that included NEAMAP in the Mid-Atlantic, the other Mid-Atlantic indices (NEFSC, ChesMMAP, VIMS) had to be recalculated using the common time period of all three surveys (2007-2019) in order to have a common reference. However, since both the NEFSC and ChesMMAP indices were not available in 2020 due to COVID-19 impacts, NEAMAP was the only available regional index in 2020. Additionally, the VIMS survey was not available in 2019, also due to COVID-19, so the juvenile TLA for 2020 only uses NEAMAP.

- The addition of NEAMAP to the Mid-Atlantic TLA composite characteristic for juvenile Atlantic croaker showed the same general trend of declining recruitment and high levels (> 60%) of red in recent years (Figure 22). While the composite only went through 2018 in order to correspond to data available from the ChesMMAP and VIMS surveys, red proportions were still above 60% for just the NEAMAP survey (Figure 22).
- The adult Atlantic croaker composite characteristic for the Mid-Atlantic with NEAMAP included also showed increasing proportions of red and would have triggered in 2019 at the 30% threshold (Figure 23).

6.3 Summary

The addition of the NEAMAP survey to the Mid-Atlantic composite characteristics supports trends seen with the other indices used in the composite characteristic. The only limitation on the NEAMAP survey is a more limited time frame compared to the other surveys. The TC might consider adding the NEAMAP survey to the Traffic Light Analysis after the next scheduled benchmark assessment for Atlantic croaker and re-evaluate the use of the NEFSC survey for use in the TLA. The impact of COVID-19 in 2020 on the different fishery independent surveys and

the availability of the fully calibrated ChesMMAP index also makes it a good idea to wait on making changes on the TLA until report year 2022.

Figure 22. Juvenile Atlantic croaker (ages 0-1) TLA composite characteristic index for the Mid-Atlantic through 2018 using NEAMAP and VIMS with a 2007-2019 reference period

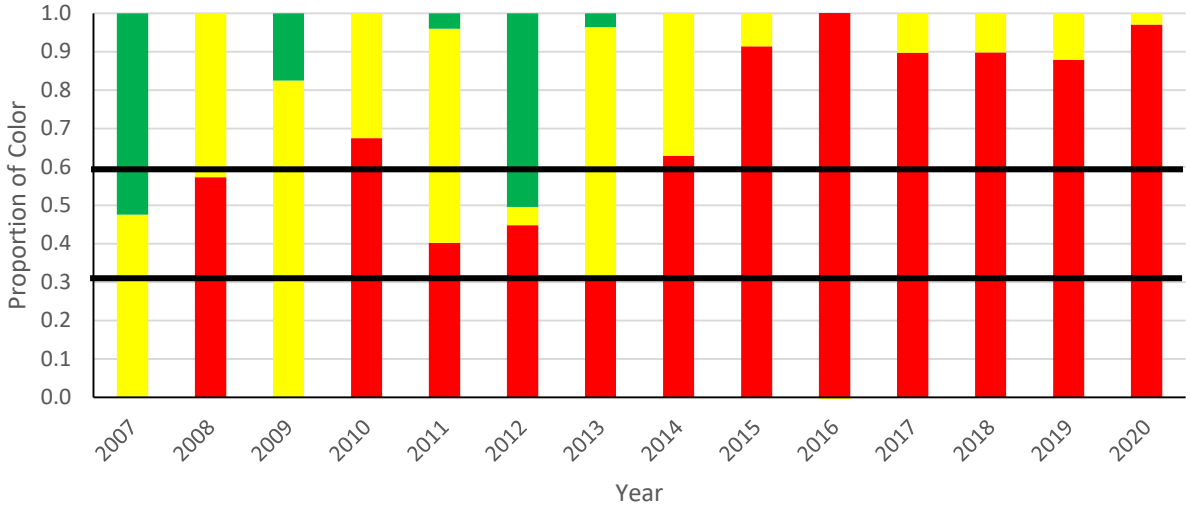
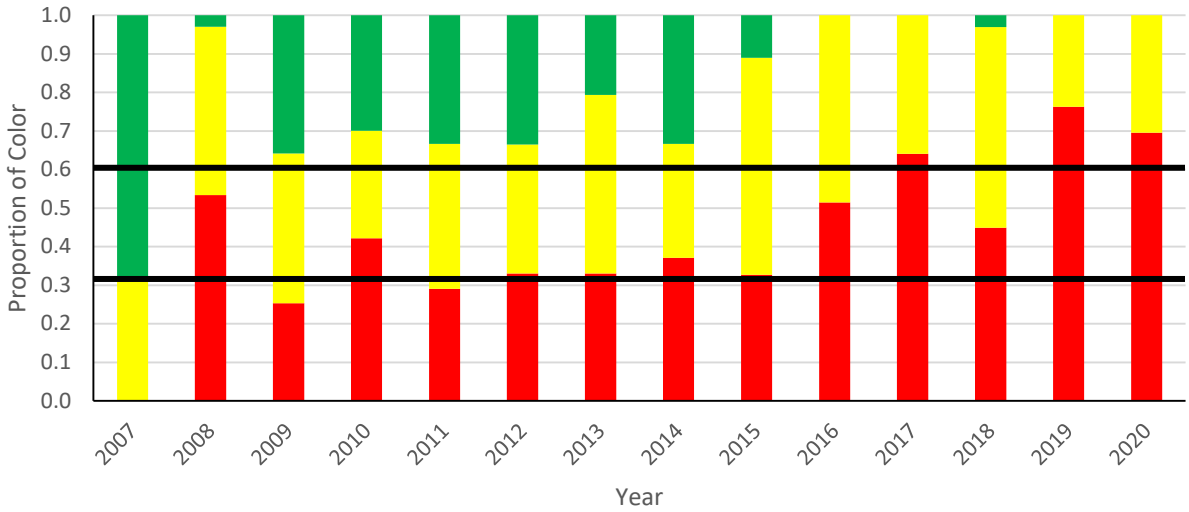


Figure 23. Adult Atlantic croaker (ages 2+) TLA composite characteristic index for the Mid-Atlantic (NJ-VA) through 2018 using NEFSC, NEAMAP and ChesMMAP (2007-2018), NEFSC and NEAMAP (2019) and NEAMAP only (2020) with a 2007-2019 reference period



Atlantic States Marine Fisheries Commission

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MEMORANDUM

July 16, 2021

To: **Sciaenids Management Board**

From: **Savannah Lewis, FMP Coordinator**

RE: **Discussion of the next stock assessment and application of a Traffic Light Analysis for black drum**

Attendees: Harry Rickabaugh (Chair, MD), Chris McDonough (SC), Chris Stewart (NC), Craig Tomlin (NJ), Ethan Simpson (VA), Jordan Zimmerman (DE), Ryan Harrell (GA), Shanae Allen (FL)

Staff: Savannah Lewis, Jeff Kipp

This memorandum serves as a summary of the Black Drum Technical Committee (TC) call on April 29, 2021. The following outlines the TC's discussion, consensus statements, and recommendation for the Board' s consideration regarding the next stock assessment and the use of a Traffic Light Analysis (TLA) for monitoring black drum.

Background

Black drum is considered a data-poor species, and the previous assessment approved for management use in 2015 relied on data-poor, catch-based modeling methods. Recreational catch (harvest and discards) and, to a lesser extent, commercial landings were important components of the assessment. Limited size and age composition data have been collected, and black drum rarity and complex migratory patterns lead to highly variable levels of encounter in fishery independent-surveys and fisheries. In 2019, the TC met to review available data and recommended the Board consider postponing the scheduling of the next assessment until 2022.

During the annual FMP Review process in 2020, the Black Drum Plan Review Team (PRT) recommended the Sciaenid Management Board (Board) consider the use of a TLA to evaluate stock status in the absence of an updated stock assessment. The TLA is a statistically-robust analysis 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-poor species, or species which are not assessed on a frequent basis. Due in part to a lack of new data, the stock assessment was postponed in 2019. The Board tasked the TC to evaluate the feasibility of a black drum TLA if the stock assessment was delayed again and provide a report at the August 2021 meeting.

Call Summary

- Staff presented MRIP values, both calibrated historical estimates and the new estimates since the TC meeting in 2019. The trends in catch are similar through time between the uncalibrated and calibrated estimates. Likely, the revised MRIP numbers would impact the scale of the population estimate and reference points to a greater degree than the trends.
- Each state TC member presented available state commercial landings and survey data. Members discussed the different surveys, as well as patterns in the data sets and any changes in recent years. Few fishery-independent surveys regularly encounter black drum, and the majority of biological data comes from fishery dependent sampling. Some states have reported an increase in charter trips targeting black drum. New information that could be used include tagging data, observer data, and charter logbook data.
- The TC Chair presented information about a TLA and a stock assessment, including pros and cons of each for the TC discussion on the appropriate next step for black drum management advice. For example, a benchmark stock assessment has the potential to improve the prior model or use new methodology due to increased years of data, but the lack of new and updated data may prevent a stock assessment from advancing from data poor assessment approaches. A TLA can provide updates to the Board that are easier to generate and interpret, but there are no good coastwide surveys and potential problems setting the red proportion triggers. The TC discussed the benefits and drawbacks of both with the presented available state data.

TC Consensus Statements

- Since 2013 there has been an increase in the proportion of released alive black drum, as well as a larger average size of black drum landed in the recreational fishery. The TC attributes these changes to the minimum size limit implemented through the FMP. Additionally MRIP data indicates there has been an increase in recreational fishing trips targeting black drum in recent years. The TC attributes this change to anglers shifting away from targeting other popular species for a variety of reasons including depleted weakfish stocks, increased minimum sizes and truncated seasons for summer flounder, and the truncation of spring fishing seasons for Tautog.
- Since the last stock assessment was completed in 2014, calibrated MRIP numbers have been released for the full time series. The biological reference points and management criteria developed through that assessment were calculated based on uncalibrated MRIP values.
- The use of a 'Guardrails' approach, such as stock indicators, or empirical metrics, could potentially be developed during or after the stock assessment process to monitor the stock between future stock assessments. The selected 'Guardrails' should be easily applied, take minimal time to complete, and reviewed annually in some formal process or structure.
- If a TLA is to be developed for black drum, the current reference points need to first be updated with the revised MRIP data. The TC discussed that a benchmark stock

assessment should come before a TLA, even if the assessment is just an update of the current, data-poor model.

Recommendation

The TC recommends not pursuing a black drum TLA at this time, and instead devote that time to conducting the already scheduled benchmark stock assessment to be completed in 2022. The TC indicated it is important to develop reference points which include the revised MRIP data, and to develop stock indicators to monitor the resource between stock assessments. Additionally, the next assessment will help provide information for the Board's consideration of management triggers, a critical component in the development of a TLA.

The TC notes there continues to be limited available data including, but not limited to, length and age composition, sex, growth, movement, selectivity, discards, and catch-and-release mortality rates– which are important components for modeling the resource. Additionally, there is no coastwide fishery-independent survey that regularly encounters black drum. Without this information the recommended 2022 benchmark assessment and future assessments will likely continue to rely on data-poor modeling approaches again or be delayed until the TC determines there is a reason for an updated assessment, such as selected indicators indicating concerning trends.

For more information, please contact Savannah Lewis, Fishery Management Plan Coordinator, at 703.842.0740 or slewis@asmfc.org.