

**PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
SCIAENIDS MANAGEMENT BOARD**

**The Westin Crystal City
Arlington, Virginia**

**August 4, 2022
Approved May 1, 2023**

Proceedings of the Sciaenids Management Board
August 2022

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1. **Approval of Agenda** by consent (Page 1).
2. **Approval of Proceedings** of May 2, 2022 by consent (Page 1).
3. **Move to approve the Red Drum FMP Review for the 2021 fishing year as amended today, state compliance reports, and *de minimis* status for New Jersey and Delaware** (Page 16). Motion by Lynn Fegley; second by Doug Haymans. Motion approved by unanimous consent (Page 16).
4. **Move to approve the Atlantic Croaker FMP Review for the 2021 fishing year, state compliance reports, and *de minimis* status for New Jersey, Delaware, South Carolina, and Georgia commercial fisheries and New Jersey and Delaware recreational fisheries** (Page 16). Motion by Marty Gary; second by Tom Fote. Motion approved by unanimous consent (Page 16).
5. **Move to nominate Doug Haymans as Vice-chair of the Sciaenids Management Board** (Page 17). Motion by Pat Geer; second by Spud Woodward. Motion approved by unanimous consent (Page 17).
6. **Move to adjourn** by consent (Page 19).

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ATTENDANCE

Board Members

Joe Cimino, NJ (AA)	Mel Bell, SC (AA)
Tom Fote, NJ (GA)	Malcolm Rhodes, SC (GA)
John Clark, DE (AA)	Chris McDonough, SC, proxy for Sen. Cromer (LA)
Roy Miller, DE (GA)	Doug Haymans, GA (AA)
Lynn Fegley, MD, Administrative proxy	Spud Woodward, GA (GA)
Russell Dize, MD (GA)	Erika Burgess, FL, proxy for J. McCawley (AA)
Pat Geer, VA, proxy for J. Green (AA)	Gary Jennings, FL (GA)
Chris Batsavage, NC, proxy for K. Rawls, Chair (AA)	Marty Gary, PRFC
Jerry Mannen, NC (GA)	

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

Ex-Officio Members

Dawn Franco, Chair, Atl. Croaker Technical Committee	Harry Rickabaugh, Chair, Black Drum & Spot Technical Committees
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Staff

Robert Beal	Lisa Havel
Toni Kerns	Chris Jacobs
Tina Berger	Jeff Kipp
Tracey Bauer	Sarah Murray
Lisa Carty	Anna-Mai Christmas Svajdlenka
Emilie Franke	Geoff White

Guests

Max Appelman, NOAA	Janelle Johnson, NC DENR	Lindsey Nelson, NOAA
Pat Augustine, Coram, NY	Raymond Kane, MA (GA)	Will Poston, SGA
Linda Barry, NJ DEP	Kathy Knowlton, GA DNR	Jill Ramsey, NYS DEC
Jeff Brust, NJ DEP	Kris Kuhn, PA F&B	Jason Rock, NC DENR
Nicole Caudell, MD DNR	Rob Latour, VIMS	Steven Scala
Heather Corbett, NJ DEP	Chip Lynch, NOAA	Ethan Simpson, VMRC
James Fletcher	Shanna Madsen, VMRC	Amanda Small, MD DNR
Anthony Friedrich, SGA	John Maniscalco, NYS DEC	Somers Smott, VMRC
Lewis Gillingham, VMRC	Joshua McGilly, VMRC	Scott Curatolo-Wagemann, Cornell Univ
Angela Giuliano, MD DNR	Jack McGovern, NOAA	Angel Willey, MD DNR
Helen Takade-Heumacher, US FWS	Dan McKiernan, MA (AA)	Chris Wright, NOAA
Carol Hoffman, NYS DEC	Steve Meyers	Daniel Zapf, NC DENR
Kyle Hoffman, SC DNR	Chris Moore, CBF	Jordan Zimmerman, DE DFW
Jesse Hornstein, NYS DEC	Allison Murphy, NOAA	

Proceedings of the Sciaenids Management Board Webinar
August 2022

The Sciaenids Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia, via hybrid meeting, in-person and webinar; Thursday, August 4, 2022, and was called to order at 8:00 a.m. by Chair Chris Batsavage.

CALL TO ORDER

CHAIR CHRIS BATSAVAGE: Good morning. I would like to welcome everyone to the Sciaenids Management Board meeting. My name is Chris Batsavage; I'm the Administrative Proxy from North Carolina, and I'll be serving as Chair.

APPROVAL OF AGENDA

CHAIR BATSAVAGE: We'll start off the meeting with the Approval of the Agenda. One addition that we'll make to the agenda is, Erika Burgess will be updating the Board on rule changes and new management approaches for red drum in Florida.

Are there any other changes or additions to the agenda? If not, then we will consider the agenda approved.

APPROVAL OF PROCEEDINGS

CHAIR BATSAVAGE: Next will be approval of the proceedings from the May 2022 Board meeting. Are there any edits or changes to those proceedings? Seeing none; those are approved.

PUBLIC COMMENT

CHAIR BATSAVAGE: Next up is public comment. This is an opportunity for the public to provide comment on any items related to the Sciaenids Board that aren't on the agenda today.

We have a fairly light audience in person, but I will just pause to see if there is anyone online that would like to make public comment. No public comment, so we will move on to the main parts of the agenda.

REVIEW OF THE TRAFFIC LIGHT ANALYSIS FOR SPOT AND ATLANTIC CROAKER

CHAIR BATSAVAGE: We'll start that off by the Review of the Traffic Light Analysis for Spot and Atlantic Croaker. I believe spot is up first, and Harry Rickabaugh from Maryland will be giving that presentation. Harry, whenever you're ready.

SPOT

MR. HARRY RICKABAUGH: I'll be giving the first part of the presentation, which will be the impacts on the data availability we had in both 2020 and 2021. I will then go over the spot traffic light analysis for 2022 that uses data through the 2021 fishing year. After that then Dawn will take over, our Atlantic croaker TC Chair, and she will do the 2020 traffic light analysis for Atlantic croaker, which also uses data through the 2021 fishing year.

One of the main things we're missing is the ChesMAPP Index. That survey had a vessel change and other gear and method changes, following the 2018-fishing season. Data from 2019 through 2021 is currently not available, because they have not yet done the calibrations. They have a minimum number of side-by-side tows they want to do, and are actually still doing them.

They are going to have a really good comparison tow dataset that they wanted to build before doing their comparisons, so they can back calculate the old index to match the new index we'll be using moving forward. We don't unfortunately have that data for the past three years. That is used in the Mid-Atlantic for both the adult abundance index, and as part of the juvenile index for both species. I know it is for spot, I believe both species juvenile, definitely both species for adult.

We do expect that to be available, at least they expect to have the calibration available early to mid-next year. We're hoping by this time next year we will have all three of those years then available again including 2022. This is not like some of our pandemic related deficiencies. This will be data we'll get back; we just don't currently have the

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index to be able to calculate the traffic light analysis.

Some of the other surveys were interrupted. These are mainly pandemic related. The Northeast Fisheries Science Center Bottom Trawl Survey was not conducted in 2020. For those species we're using a proxy value, which is the average of 2018, 2019 and 2021. It's a three-year average. Once we get 2022, we'll probably average that one in as well, or the TC can decide if they have a better method for a proxy value. But that is what we're using for now.

SEAMAP was not conducted at all in 2020 or in the spring of 2021, so we are missing the adult abundance indices for both 2020 and 2021 for SEAMAP. That is used in the south region for both species as well. We have some missing data for both species and both regions.

Several state surveys had some minor impacts. Probably the biggest one, the one we used the most is the North Carolina 195 Survey. It did operate in 2020 and 2021, but due to limitations from the pandemic, they could not do their work offshore, in the Sounds. They had to stay closer, so especially in river sites there was some impact too, certain areas were not sampled. There is likely some bias in that, which will be discussed later.

The MRIP 2020 was affected to some degree. It varies by state, of course. We reviewed that before. 2021 data is not affected. Now I'm going to go into just the spot traffic light. As I mentioned, Dawn will go over croaker later. Just as a reminder, management action was tripped in 2020, which regulations went in place in 2021.

Addendum III requires that those management actions stay in place until 2023. This will be the first year, the evaluation we're doing right now, that would have any opportunity to relax regulations, and that would be for the 2023 fishing year. Just really quick, we've gone over these many times before, but in case there is anyone else on the Board and/or online that has not seen these before.

The traffic light for both species is split into two regions, the Mid-Atlantic Region and the South Atlantic. The Mid-Atlantic is from Virginia north, the South Atlantic is from North Carolina south. Both traffic light analyses uses what we are referring to as a harvest composite, which uses the recreational and commercial harvest data.

Then there is also an adult abundance composite, and that uses fishery independent indices, and for spot we use Age-1 plus, we split those indices out, removing any age-0 fish. We also use auxiliary information, which I'll go over later. But those are the two parts that mean they will trigger management action. We'll see a lot of these figures today. What you see here, this is for the harvest composite for spot. The top graph is for the Mid-Atlantic. Again, as a refresher, we have two thresholds. One is the 0.3 percent red. If the red bars on the bottom exceed 30 percent, at that point we're considered to be in low concern or moderate concern, I should say, level.

For spot, if two of the terminal three years are in that level, management action needs to be taken. That is where we were back in 2020. As you can see, 2018 and 2019 were just above that 30 percent threshold. Once management action is tripped, these composite indexes aren't used, and that can trip further management at a higher level, which would be that 60 percent.

If two of the terminal three years for spot were over that, we would then go into a higher level of management action, which is prescribed in the Addendum. It would be more significant than what we have in place now, but again, commercial wouldn't be used, because we put regulations in place that should artificially increase the proportion of red, because this is based on harvest, and we are restricting harvest.

Just as a note, only 2021 would be affected in this particular figure by those regulations. For spot, the Mid-Atlantic, as you can see, has seen some improvement in the proportion of red. It's still over 20 percent, but it is under that 30 percent threshold the past two years. The South Atlantic however,

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has remained high, with values above 50 percent for the past four years, but has remained just below that 60 percent threshold for the past three years.

This is the Mid-Atlantic composite for the adult indices, and again take a close look at that top one, you'll see it only goes through 2018, because again we're missing ChesMMAAP from 2019 forward, so we can't really do a composite index. At this point we don't have any of the terminal three years in that figure.

The TC did look at the available data we had, which mostly uses the Northeast Fisheries Science Center trawl survey. As you can see, it's actually shown an improvement, it's all green in the terminal three years. But again in 2020 it is an imputed data point, it's not an actual value it's an average. We really don't know what 2020 was, and as you can see in the graph above ChesMMAAP was the main contributor of that value in the terminal years.

We were seeing a difference in the inshore surveys versus the offshore surveys. In absence of having ChesMMAAP, we don't really know what our proportion of red is, because we would suspect, or at least in the past that is where the highest proportion of red came from, and we're missing those datapoints at this point in time.

For now, we're considering the adult abundance metric as unknown, because we are missing that ChesMMAAP datapoint. We are making a determination of where the abundance is based on just the one index. This is the same sort of look, but for the South Atlantic. One note, if you happen to look at your report that was in supplemental materials.

Unfortunately, right after that came out, I was putting this presentation together and we noticed there was a mistake in the South Atlantic composite, which again only runs through 2019. We're not really using that to evaluate management, since they are missing two terminal years. But the proportions of red were too low, and it was accidentally, because there was an error in that we just did not catch in time unfortunately and I

apologize for that. But the figure on your screen is correct. For the South Atlantic, again 2019 was the only one that falls in a terminal three years.

The proportion of red was under 30 percent. As you can see previously it was above. But we do not have the last two years data, because we used SEAMAP in this one. In the absence of SEAMAP, we have the North Carolina Department of Marine Fisheries Program 195. This again is for Age 1 plus fish only.

You can see it also was below the 30 percent threshold of red for the last two years, but is red not green again. When you start to see green, that's when you're at or above the long-term mean, so obviously this survey has remained below the long term mean for the previous six years. Some of the auxiliary information we look at, those are the two pieces we would use for triggering management.

I should have mentioned on the previous slide, like the Mid-Atlantic, we're considering the South Atlantic adult abundance metric is unknown as well, since we're missing SEAMAP. Some of the auxiliary information we have is shrimp trawl bycatch. We don't use this for triggering, but we do track it, to see if there are any shifts in that trend. These are estimates based on effort, which you'll see on the left. That is shrimp trawl effort.

On the right is the actual estimate of the discards in millions of fish. You'll see it is pretty variable, kind of a somewhat stable level lately. There was a spike there in 2019. This index does also use SEAMAP as a tuning index, and SEAMAP had high values in that particular year, so that was partially what bumped that up. As we can see, the effort was pretty flat between 2020 and 2021, as the estimate was as well.

For juvenile indices we again split these north to south. Both north and south for spot utilized ChesMMAAP in the north as an Age-0, and SEAMAP in the south. There are two indices in this one. But obviously since we're missing those, I did not

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present them, especially since they've been missing for multiple years now.

What we have here on the top is the Mid-Atlantic. This is only the Maryland Seine Survey, and as you can see there actually was an increase above the mean for the past two years. In the South Atlantic, the North Carolina Department of Marine Fisheries Program 195, it shows proportions of red, so those two regions seem to be disagreeing.

As you can see in the past, like 2017, '18 was the opposite. It doesn't seem like we're getting improvement in both regions at the same time. We're getting average to below average for an extended period now. As I mentioned earlier in the data limitation of the Program 195, it didn't sample all sites. Since it wasn't sampled in more open water Sound sites, there could be a bias in one direction or another.

I'm sure Dawn will probably touch on it with the croaker. The member from North Carolina, just aside from our traffic light analysis, they did a memo to their own department on what those impacts may be for croaker. It was actually biased high. But that same sort of analysis wasn't done for spot, so we don't know if utilization of that riverine verses more Sound areas, is different for spot like it was for croaker. But it seemed like croaker were more abundant in the riverine sites that were sampled than they were in the Sound sites.

But again, if that were true for spot, these will be overestimates. Of course, the reverse could be true, since that analysis wasn't done directly for spot. In general, looking at this table, you'll see the last three years for each metric, what the percentage of red was. As you can see, unfortunately we can't, as I mentioned, we can't use the harvest metric to increase. But we could use it as an indicator of improvement.

Obviously, if we put regulations in place, you expect lower catches. If you had higher catches, you would assume that is a sign of more abundance or availability, I should say, of the fish to the fisheries. We're not really seeing that, particularly in the

South Atlantic, a moderate improvement in the Mid-Atlantic. But we're still in the red, so we're still below average.

It is hard to say with the South Atlantic how much of that is regulation driven, although there is very little change between 2020 and 2021. We don't have the full complement of indices for either the South Atlantic or the Mid-Atlantic to make a determination based on the adult or Age-1 fish, I should say, abundance.

At this point the TC is considering the traffic light analysis determination is unknown for both 2020 and 2021. For spot this would be, as I mentioned earlier, the year that we could consider a regulation change in 2023, since the regulations have been in place for two years. The TC is recommending maintaining the current regulations, in light of the adult abundance metrics being unknown, and the fact that harvest levels have not shown a significant improvement. They also have also seen mixed results from or mixed indications from the juvenile indices.

There is not enough support for us to recommend relaxing those regulations at this point in time. Also, very hopeful that we'll have that ChesMMAP time series next year, and terminal year values for all the surveys, which will put us in a much better position to see where we are, and make a more solid recommendation for the Board. That's all I have for spot. If you have any questions regarding either the changes in the, or I should say the unavailability of indices for the spot traffic light itself, I would be more than happy to answer. Thank you.

CHAIR BATSAVAGE: Thank you, Harry. Any questions for Harry on the traffic light analysis for spot? Okay, if there are no questions then we'll pass it over to Dawn Franco to give the croaker traffic light analysis. Dawn, whenever you're ready.

ATLANTIC CROAKER

MS. DAWN FRANCO: Okay, sounds good. Good morning, everyone. What we'll talk about for

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croaker, as usual, is very similar to what you just heard about spot. The key things to keep in mind are the number of years for trigger mechanisms are different. We have three out of the last four years for Atlantic croaker, instead of two out of the last three, like you just heard for spot. Then also, the regulations were set to be in place for three years instead of two years, like spot had. Those are the big key differences to remember going into the presentation. Management triggered in 2020, same as spot, and regulations were put in place in 2021. Those measures cannot be relaxed.

Again, we'll keep the same pattern here. We'll go with the harvest composites first. That is recreational and commercial combined, just a reminder. The first slide is Mid-Atlantic and South Atlantic, both shown on the same slide. For the Mid-Atlantic, we've actually been above 30 percent for the eighth year in a row, and the past four years above 60 percent. Then the South Atlantic was also above 30 percent for the past eight years in a row, but with no years above 60 percent.

As Harry very eloquently just said earlier, the last year we had management measures in place, so we would expect to see a little bit more red increase in that year, because we would expect that catches were declining, because regulations were set in place. We do see that for both regions. Then moving forward, 2021 data cannot be used to trigger elevated management response, until the regulations are lifted.

But if we saw improvement, that would be a good indicator that we could relax regulations. Then we'll move into the adult abundance composite indices, and for this one we have separate slides for Mid-Atlantic and South Atlantic, to address some of the missing data issues. Again, Mid-Atlantic uses ChesMMAP, so it cannot be updated beyond 2018. This is actually the same graphic that we've shown you the past couple of years at the top. But we do have a full data series for the Northeast Fisheries Science Center minus the 2020 imputed data, of course. We looked at just that one survey, just to see some sort of updated information. We see that the three out of the past four years were actually

below the long-term mean, with increases in abundance of about 32.5 percent in 2021.

Based on just that one survey, it looks like we're trending at least in a good direction, and while it's possible that 2019 could have exceeded 60 percent, you know if it was combined with another survey. It's unlikely that we had 3 out of the 4 previous years exceeding 60 percent, which is what we would need to say that we need an elevated management response.

Then this is the South Atlantic Adult Abundance Composite, and again we are missing SEAMAP data for 2020 and spring of 2021, so we cannot show an updated version of the composite beyond 2019. This is what we presented last year, same as the Mid-Atlantic, but the composite hasn't exceeded 30 percent since 2010.

Then if we look just at the one survey, the South Carolina Trammel Net that is in the composite, 2020 and 2021 we saw increases, and then the red has been below 30 percent since 2017. For this region we're likely not even exceeding 30 percent threshold in previous 3 out of the 4 years. Again, juvenile indices are not used for triggering management measures, but we do track them and provide them as supplementary data.

We do use ChesMMAP in the Mid-Atlantic juvenile abundance for Atlantic croaker. We cannot update that beyond 2018. But we can look at the other survey that is in the composite, which is the VIMS data. VIMS alone shows just the previous or the most recent two years, and we are seeing declining abundance in 2020 and 2021, and continued high red proportion is an indicator that there is poor recruitment in those years. It's definitely something for us to keep an eye on moving forward.

Then the South Atlantic juvenile abundance is actually not a composite, it is just the North Carolina Program 195 survey, and as stated earlier, not all stations were sampled in 2020 and 2021, and as Harry mentioned, there was a study that was completed that outlined that Atlantic croaker may

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actually be overrepresented, and has elevated magnitude in those years.

There is a little bit of a bias for those years, because they didn't sample all areas. But we only see red exceeded 60 percent in 2018, with the past three years above average. Even 2019 that was not affected at all, it was still above the long-term mean. Those are all good indicators. Next, we have the South Atlantic shrimp trawl fishery discards.

The figure on the left is the same as what you saw. The effort is exactly the same as we saw for spot, and then the discards are slightly different, because it's different species. But the net fishing hours have been relatively low from 2020 until 2021, but pretty flat, same as the year before, and it's low compared to the rest of the time series as well.

Harry pretty much covered everything that you would need to know as background data for this. But at least we're seeing a little bit of a downtrend in recent years. This is the summary table that we provide for you that tells you all of the percentages for all of the regions, and all the composites that are used in the trigger mechanism.

Just another reminder, with regulation changes in effect in 2021, the trigger would be based solely on adult abundance starting in that year 2021 forward, as long as regulations are put in place. But because croaker is 3 out of the last 4 years, we can still look at 2018 through 2020 for making decisions.

But to propose any change, we would need to see either exceed 60 percent in 3 out of those 4 years for either region. We have status unknown for 3 out of the 4 years in the Mid-Atlantic, due to the data gaps. But we also see increases in abundance from the Northeast Fisheries Science Center Survey in recent years, indicating that we shouldn't really expect to have triggered an elevated response in that region.

Then 2 out of the 4 years in the South Atlantic for the adult abundance were mostly green, so no triggers were likely tripped there either. Then hopefully by next year we'll have all the data that

we need to fill the gaps for ChesMMAAP, and be able to fill in those years, and will no longer be unknown. We'll have a good idea of how everything is going in the Mid-Atlantic region for the adult abundance.

Then also we'll have more SEAMAP years to help fill in any data gaps there. With management already in place, and in place for a minimum of three years through the end of 2023, the TC recommends maintaining the current management measures and no change was recommended. That is all I have for you, but I'm happy to take any questions.

CHAIR BATSAVAGE: Thank you for the presentation, Dawn. Any questions for Dawn on the croaker traffic light analysis? Yes, John Clark.

MR. JOHN CLARK: Thank you for the presentation, Dawn and Harry. Just curious with croaker, I mean they seem to have these long population cycles. But this time it seems like the down part of their population trend, this trough, seems to be going on an extremely long time. Does that show up in the data? Is this a very long down period for the croaker, or is it pretty much typical to what you've seen in the past?

MS. FRANCO: I feel like we're definitely seeing declines with juvenile abundance. If we want to go back up and look at the adult abundance, I feel like we're actually going in a more positive direction for the adult abundance. But it's just that one survey that we were looking at in the juvenile composite for the Mid-Atlantic that's showing increasing proportion of red.

I'm hoping that we are actually getting more back on an upward trend in that cyclical pattern. But it does, yes absolutely, tend to go up and down. But we will know more when we have all of the ChesMMAAP data included. In the packet, you'll see that there is a lot more information provided, and we actually threw in some other surveys, just to look at more information, as much as we could possibly look at.

It seemed like all surveys were trending in a positive direction, at least for the adult abundance

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composite, from memory. I don't remember exactly what all the juvenile composites said, but I believe it's only in the Mid-Atlantic that we're seeing increased red proportion in recent years. I hope that answers your question.

CHAIR BATSAVAGE: Yes, thanks, John. Good question definitely, cyclical pattern has been around a while for croaker, and yes, the trough has been pretty low. Hopefully it's turned in the right direction. I guess we'll find out in a couple years. Roy Miller.

MR. ROY W. MILLER: This question is either for Dawn or Harry. In the plots of net hours fished in trawl fisheries versus discards, did you plot discards per hour fished, combine the two to see if there is a trend in that direction?

MS. FRANCO: Unfortunately, neither one of us put together that figure. Do we know if anyone from the ASMFC staff is in the room that could answer that question?

CHAIR BATSAVAGE: Yes, go ahead, Jeff.

MR. JEFF J. KIPP: Hey Dawn, this is Jeff, and I can jump in, and I worked up those estimates on shrimp trawl discard estimates. We do have a table of the catch rates per year. I don't know off the top of my head what that trend looks like with just the catch rates alone. But we could provide that in future updates of these, if that is of interest.

MR. MILLER: I thought it would be of interest to see whether the catch per unit effort has been going down. Obviously, the discards are going down. But I presume that's in addition to bycatch devices, it's probably a reflection of net hours going down as well. I was just curious what the catch per unit effort looked like. Thanks.

MR. KIPP: Yes, if you look at those trends. I mean there is definitely some similarities between the effort and the total discards. From that alone I would suspect, without having the data in front of me, that the trend in CPUE is somewhat stable. But

yes, we can definitely include those in future updates as an additional figure.

CHAIR BATSAVAGE: Yes, thanks, Jeff, and thanks for the question, Roy. I guess any additional information on kind of getting a better sense of the shrimp trawl discard trends I think would be good. Pat Geer.

MR. PAT GEER: Just following up on what Roy was saying, in a lot of the states in the southeast, the shrimp fishery, the number of licenses has been going, a lot less vessels so the effort is going down as well in that fishery. But that is a good point about looking at trawl hours. The other question I had about that was, is it the total effort for the year, Jeff, the total shrimp effort for the year? Is that what that is?

MR. KIPP: Yes, that figure shows all of the shrimp trawler effort across the South Atlantic.

MR. GEER: Is it the total landings for croaker and spot that are compared to it in that one graph?

MR. KIPP: No, that is estimated discards. That would be essentially the catch rates that we were discussing applied to those net hours, to expand it up to a total discard.

MR. GEER: Is seasonality considered in that at all?

MR. KIPP: It is considered in the models to estimate the discard rates.

MR. GEER: All right, thank you.

CHAIR BATSAVAGE: Any further questions on either traffic light analysis? I know we're on croaker, but if there are any questions folks have on spot that they've thought of, I'd entertain those as well. Okay, seeing no questions, the TC has recommended no changes to management for either spot or croaker, and spot is up for consideration in 2023 with the two years in place for the traffic light. Croaker is not.

As both analyses showed, the status is largely unknown for both, until we get the surveys they rely on back full time. Hopefully that's going to be the case in 2022. That and with ChesMMA data available next year for the missing years, hopefully we'll have a little clearer picture of the traffic light analysis trends for both species, and I guess we'll go from there.

Unless there is an urge by anyone to make any changes based on what we have, I guess we'll just see what next year brings. All right, I appreciate the presentations and the questions by the Board.

REVIEW THE DEVELOPMENT OF A SPATIAL MODEL OF SPOT ABUNDANCE AND MORTALITY

CHAIR BATSAVAGE: We'll move on to the next agenda item, which is To Review the Development of a Spatial Model of Spot Abundance and Mortality. Dr. Rob Latour will be updating the Board on that work, so Rob, whenever you're ready.

DR. ROB LATOUR: Good morning, everyone. Thank you very much for the opportunity to speak with you this morning. I'll try to be brief, because I know you have a lot to cover. Really just want to give you an overview of what Mike and I are thinking regarding developing a spatial model for spot.

There is a broader context here, which I'll get to right here in the next slide. For probably two decades now or longer there has been some broad interest in understanding effects of environmental drivers on fish and shellfish populations in the Bay. I'm thinking back to the late nineties for some technical reports promoting ecosystem-based fisheries management that led to the fisheries Ecosystem Plan, and subsequent ecosystem modeling activities.

But the reality is, in order to sort of understand those relationship at the population level, we need Bay-wide estimates for most of the species. We really don't have those. We kind of are limited, in terms of our ability to understand environmental impacts, without estimates of abundance and survival as well.

Mike and I several years ago approached NOAA Chesapeake Bay Office leadership with the idea of developing a framework for trying to develop these estimates for a number of species, where we had the ability to estimate Bay abundance, as well as coastal abundance. That is really what I'm going to talk about here briefly this morning, is just to give you an overview of what we're thinking, and our intention to apply it to spot.

The goal or objectives is to develop a spatial model that gives us estimates of abundance and mortality rates for spot in the Bay, as well as in the coast. The idea here is to take that information and then allow linkages to environmental drivers, to understand how environmental impacts may be affecting population dynamics, and ultimately make all of this information and methodology available to the public, to facilitate additional research they can imagine.

You have a time series of abundance and mortality for a particular location that facilitates direct relationships and analyses with broadscale climate drivers or other policy-type evaluations, to understand responses of the populations on the community. As I mentioned, this was a broader framework that Mike and I had in mind.

We're grateful to NCBO for the support. An initial three-year project was kicked off two years ago, and in that project, we suggested we could tackle two species. NCBO reached out to other management agencies, VMRC, Potomac River Fisheries Commission and Maryland DNR, possibly even outside of that domain, for ideas on which two species to select.

Right out of the gate, as you might imagine, striped bass was number one, so for the last couple of years we've been working on that, and we've made good progress. Late '21, early '22, we initiated the conversation for what would the second species be. The feedback that came was converging on spot. The reasoning was tied to a few things, one is spot represented a forage species, so this would be a way to sort of provide some insight, striped bass being the predator, spot being a prey. Maybe there

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is some value added there. As you all know, there is no currently accepted assessment for spot. Perhaps some of our work can help facilitate and enhance TC activities as they move forward in the coming year with their assessment activities. Our goal here is to develop this analytical product in concert with the TC, but not in a sense of competing or duplicating anything that the TC might do, when it comes to their assessment activities.

Our intention is to have a value-added enhancement that hopefully will facilitate good discussion, and possibly improvements for the assessment model that they bring forward to peer review. Real briefly, just to give you a sense of the structure, we're thinking of age-structured model, spatial, statistical catch at age, so pretty standard thing here with the nuance being this will be spatially explicit.

We'll keep track of two populations in two areas. These are all the available survey data and catch data that would normally go into the assessment. But a benefit here is both Mike and I have graduate students who will be working on the project, and my student is just beginning here PhD. She is interested in tackling some of these objectives that the TC may not have time to address, to be honest.

You know habitat modeling using the survey data, investigating questions about potential shifting of distributions or habitat utilization. Patterns and responses to environmental drivers on broadscale, and really, she wants to focus heavily on a management strategy evaluation simulation component.

Possibly evaluating in a management strategy context, the traffic light or any other harvest policies or control rules that the TC and you all as the Board might want to consider. These are some of the value-added concepts that we're thinking that may enhance the TC's activities. Kind of in a picture sense.

If you imagine on the top row here the box being the coastal zone, and on the bottom row the box being the Bay. The timeline on the bottom sort of

beginning in late fall when spawning occurs, and running through the spring, summer and subsequent fall, wrapping around to the following year.

Spot are offshore spawners, so we have the coastal population that would produce recruits that would come into the estuary or the Bay, kind of in early spring. Some of those coastal fish will remain in the coast and survive, some of them will immigrate into the Bay for some seasonal residency over the warmer months, and then immigrate out in the fall to the coastal zone for spawning activity.

The two populations we're talking about is the coastal population and a Bay population that are seasonal, at least in the Bay, and the two areas are the coast and the Bay, so it's a two-box model, keeping track of spot in both areas, with the idea of estimating abundance in those areas and survival. Inherently, of course, we'll need understanding of movement. This is all familiar to you, I'm just noting here that our goal is to use all the available catch data that would normally go into an assessment, so the commercial catch at age, the recreational catch at age, MRIP, and some potential certainly for estimating discards, which I know has been a challenge in the past. This is not an exhaustive list of the indices, and incidentally as the PI of the ChesMMap, and I promise you all, and I'm apologizing. I feel really bad that we haven't been able to get our calibration work completed. COVID and some other challenges have delayed that process. But we will have the time series on the calibration done, and everything will be up through 2022 for you all next year.

Any other surveys that I may be missing that the Spot TC will consider, certainly will be in our discussions as well. We want to parallel the data sources as best we can. A little bit on the estimated products. We hope to estimate recruitment in each area, and abundance in each area in the first year, get a handle on fishing intensity in each area and selectivity for each of the fisheries.

Survey catchabilities and selectivity as well. Then the most kind of interesting thing might be

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understanding movement that describes, you know the proportion of the overall population that is in each area during each time step. What this means is our time step will be sub-year, maybe quarterly. We haven't figured that out yet, because we haven't really gotten going on this one.

But we will be looking at the data through a different lens at a much finer time scale and much finer spatial scale. We hope to glean some ideas about movement into the estuary and out of the estuary, and along the coast, you know, if possible. Next steps really are to submit data requests.

This may seem simple, but the reality is because of the need to have a very fine temporal and spatial resolution to some of the fishery dependent data, we're very mindful of confidentiality issues and nondisclosure type things. We're working through that process, to make sure that we're in compliance.

Early indications are that we think we can get the data at the level that we need. But we do need to be careful about confidentiality. Then to begin developing the model, we have a great deal of infrastructure in place, because the striped bass model has been working out for a couple years. Initially it will be similar to the striped bass model, and then tailored to spot, given spot's life history being different than that of striped bass.

Then my last slide is just to acknowledge Mandy at NCBL, and Tracey for linking us up today. An anticipated thanks to her for future relationship management with Spot TC, and of course Harry and the Spot TC, we look forward to working with you all closely, and funding from NOAA Chesapeake Bay Office with contributions from VIMS and CBL. That's all I had, it's just a really brief overview. I'll be happy to take any questions if there is time. Thanks again for the opportunity to speak this morning.

CHAIR BATSAVAGE: Thanks, Rob, appreciate the update on this work. Any questions for Rob? John.

MR. CLARK: Thanks for the presentation, Rob. I'm just curious. You had a management strategy evaluation. Our management of spot is pretty simple at this point. Do you see, like area-specific management in the Chesapeake as a result of this? What type of results do you see from a management standpoint?

DR. LATOUR: Yes, thank you, great question. My thought initially is to approach this, what would you like to do as the Management Board? I know you've been under some constraints and there has been some limitations. But given a simulation analysis, you know that opens up the door for whatever ideas that you may want to consider.

I don't want to have any of my preconceived ideas implemented without consultation with those, to make sure that they are in the realm of possibility. I think this would be the objectives of the MSC would be defined, based on conversations with you all, Spot TC members, any other constituents that have interest.

That's really an open question at the moment. Certainly, we could start with evaluating the traffic light approach, since that is the current approach in place. But if there are other harvest policies or strategies, area-based or not, we're certainly opened to those and happy to consider those in our evaluation. That's a little bit ambiguous there. Hopefully that addresses your question.

CHAIR BATSAVAGE: Yes, thanks for that, Rob, appreciate it. Lynn Fegley.

MS. LYNN FEGLEY: Thank you Rob for the presentation. This is really a little bit in response to John Clark's question. We were highly encouraging of this effort to take on spot, as the species were being discussed. Spot is a very hot button issue in Maryland. I think it probably is in Virginia too.

We have a lot of differing uses for these fish, from being used as live line and as commercial harvest and recreational, and it's always, it's a controversial fish in Maryland. We could really use this information. I think this exercise, this analysis, is

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going to be extremely helpful, at least just within our state as we move forward.

DR. LATOUR: Thanks, Lynn, I appreciate the support. On my slide with estimated parameters, you'll notice that there is no discussion of reference points. I just want to emphasize and underscore that we do not view this as a competing or alternative assessment model, it's more of an enhancement to whatever the Spot TC develops as an assessment model, to fill in gaps if there are gaps, or to just provide a broader understanding of the resource population dynamics. Just wanted to emphasize that. We're not trying to compete or provide an alternative model for the TC.

CHAIR BATSAVAGE: Roy Miller.

MR. MILLER: Rob, I have always been kind of curious whether there is a linkage between Delaware Bay spot populations and croaker populations in Chesapeake Bay populations. I just wondered if you are similarly curious about that, and if you would ever consider accessing readily available data sources for Delaware Bay, and maybe the coastal bays, Delaware and Maryland for, in the case of Delaware Bay adult abundance, as determined by trawl surveys, as well as juvenile abundance determined in smaller trawl surveys. Those data sources are readily available, as you probably know. It might be interesting to see if there is a correlation between those populations.

DR. LATOUR: Yes, that is a great question. For this project, I don't anticipate going beyond two spatial areas, just because of the challenge of estimating movement. But I have another student who is supported also by NCBO, who has been working on building habitat models for a number of species, including the Sciaenids spot and croaker.

One component of her work is to try to understand if the levels of exchange or emigration out of the Chesapeake, how those have played out over time, so patterns in the relative exchange from coast to Bay over time. We've also accessed Delaware Bay data, to look at the same question there.

Interestingly, what we see for almost all the species in the Bay is a decline in the exchange, if you will, that is the relative abundance of the Bay compared to the coast is going down over time from 2008 through '18. But yet in Delaware Bay it's remaining stable for most every species, or possibly in a couple of cases increasing.

The idea here is, you know sort of indirectly evaluate potential species distributions, but how are those species that may be changing their distributions are utilizing estuaries. The story is not so positive for Chesapeake, but maybe status quo if not slight improvements for Delaware. I don't know if that answers your question directly.

I don't anticipate a spatial model in this project here this morning that we're talking about, involving all of the estuaries, getting beyond two boxes or two regions is going to be probably beyond the scope of what we can do. But there are some other things happening that are trying to evaluate the relative roles of the major estuaries on the coast.

CHAIR BATSAVAGE: Any additional questions? Tom Fote.

MR. THOMAS P. FOTE: Since New Jersey sits there in part of Delaware Bay, it always was interesting to me what comes through the canal and the transfer of stuff that comes from the Chesapeake Bay into the Delaware Bay. I mean we did some of that work on striped bass, to see the mingling. When I'm looking at this, I'm looking at it saying, this is what we should be doing for management tools.

I mean we try to do that with Long Island Sound when it came to tautog, and we basically be looking for a tautog thing to New Jersey, because we never have the money to do that to look like we can manage it in region specific. Maybe this is a good time that we should be looking at, if you're going to do this research, how do you tie it into management?

How, maybe they could start managing the species a little differently in the Bays than they do in the ocean, because the abundance or the lack of

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abundance. I think it would be a wasted effort in some ways if we didn't include that into the study, because you're spending a lot of money. You might as well get all you can out of the bucks you're spending, and try to accomplish a couple more things. It's just the way I feel when I look at these studies.

DR. LATOUR: Thank you for that, Tom. I think the entry point for that would be the management strategy evaluation I mentioned. If area management is on your mind as a Board, we're certainly open to considering that in the simulation. Anything else that is on your mind we're open to considering.

I think that's what gets me excited about doing this, these are value added things that can enhance the management, and the understanding of the resource for the assessment. I guess I would just say, we'll probably be having a more detailed conversation about that in the near future, as we get into the spot model.

But in the meantime, be thinking about possible management policies that are of interest to you, so that we can come up with a step that satisfies what it is that you're, you know to be able to provide you with some quantitative evaluations of these different strategies and potential tradeoffs, to equip you with more tools. Stay tuned, I guess. Thanks.

CHAIR BATSAVAGE: Chris McDonough.

MR. CHRIS McDONOUGH: Yes, Rob, thanks, that was very interesting. I have a question on whether or not you guys are going to look at or incorporate the environmental trends in the model beyond, I know you showed your figure with a seasonal transition, a lot of which is environmentally driven, going between inshore and offshore.

Is that more of a question for, you know since you're just really looking at the Bay initially. Is that kind of too fine a scale at that point, just in terms of how it is affecting population trends, because we have seen what we think are changes? Range expansion and those other things that are

occurring, I'm just wondering if some component of that is being considered in the model.

DR. LATOUR: Yes, at the moment I don't think we will have formal relationship with environmental parameters, as part of the structure. I guess we'll wait and see, because that could emerge if there are relationships that become well established. But I will say that some of the parameters that we estimate will inherently reflect pressures from the environment.

Indirectly we may be able to uncover some of those relationships, or establish relationships with different parameters that we haven't really thought about. I can see sort of this facilitating kind of an indirect look at the role of environment. If the relationship is strong enough, sure we could include it as a structural component. The movement analysis is going to be challenging, given that we don't have, or we will have to rely on fishery dependent data to do that. Possible, but initially we're going to focus on just keeping it as simple as we can.

CHAIR BATSAVAGE: I guess before we move on, just a final question I have, Rob, and I might have missed this in the presentation. What is the anticipated time that you think this model will be done, and what terminal year of data are you planning on using in the model?

DR. LATOUR: I mentioned it was a three-year project. We just completed Year two. We hope to be spinning up spot here very shortly. We're a bit intentional, and we would like to kind of track with the TC's activities, as they work on developing their assessment. In theory, a year from now, we should have a lot more to say. I can't guarantee that we'll be able to get it done in a year, it might spill over into a little bit longer. But we're hoping to kind of parallel the process of the TC as they deliberate next year and move to peer review. That is the goal at this point.

CHAIR BATSAVAGE: Thanks, are you looking to use data through '22?

DR. LATOUR: Yes, yes, sorry. The terminal year, we will rely on the TC for that, because data acquisition is a challenge, it's a lot of work to put all the datasets together. Another value added or benefit will be how the TC decides their terminal year. We will probably, or undoubtedly follow whatever they decide as well.

CHAIR BATSAVAGE: Makes sense, great, thanks. Just one last check to see if there are any additional questions. Thanks again, Rob, look forward to your work on this.

**CONSIDER ATLANTIC CROAKER AND RED DRUM
FISHERY PLAN REVIEWS AND STATE COMPLIANCE
REPORTS FOR THE 2021 FISHING YEAR**

CHAIR BATSAVAGE: I'll move on to the next item on the agenda, and that is to Consider Atlantic Croaker and Red Drum Fishery Plan Reviews and State Compliance Reports for the 2021 Fishing Year. Tracey, whenever you're ready.

MS. TRACEY BAUER: Good morning, everyone, in the interest of time I will briefly go over the red drum and Atlantic croaker fishery management plan reviews. But obviously, more detail can be found in the FMP Review reports, and for Atlantic croaker specifically in the traffic light analysis report.

I will start off with red drum, and looking specifically at total landings for red drum. This figure breaks down the northern, which is New Jersey and North Carolina, and southern, which is South Carolina to Florida regions commercial and recreational landings, as the proportion of total coastwide landings.

In this figure, starting at the bottom, the bottom blue and green represent the proportion of total coastwide landings that are from the northern region, and that dark blue at the top is the proportion of total landings from the southern region. In 2021, 55 percent of the total landings came from the southern region, where the fishery is exclusively recreational, and 45 percent from the northern region.

This is very similar to 2020, when the split was 55 percent of the total landings came from the southern region, and 44 percent from the northern region. These splits are a significant change from the 2019 and really 2018 too, regional landing split, where approximately 20 percent were from the northern region, and 80 percent from the southern region.

Now I'll review the red drum recreational landings specifically. In this figure the blue bars are recreational landings in millions of pounds from the northern region, and the green portion is the recreational landings from the southern region. In the northern region, recreational landings were estimated to be 2.6 million pounds in 2021, which was only a slight increase from the previous year's estimates of recreational harvest at 2.5 million pounds. North Carolina was estimated to have the most recreational landings in the northern region, followed by Virginia. Of note, Virginia's red drum recreational landings increased by 84 percent from the previous year. In the southern region, recreational landings were estimated to be 3.4 million pounds in 2021, very similar to 2020 estimates, which were 3.3 million pounds.

Florida is estimated to have the most pounds of recreational landings in 2021, followed by Georgia. These two figures show the recreational total removals by region, with northern removals on the top and southern on the bottom. Both figures show the number of fish landed, which is green in the northern region figure and red in the southern region figure.

The estimated dead discards, which is blue in the northern region figure and orange in the southern region figure in 10,000s of fish. In the northern region the number of fish landed in the recreational fishery was nearly 600,000 fish, which was down 13 percent from 2020. It's estimated that 8 percent of the released fish die as a result of being caught, which gives us an estimated of a little over 300,000 dead discards in 2021.

Recreational removals for the northern region are best estimated to be around 890,000 fish in 2021.

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In the southern region the number of fish landed in the recreational fishery was 1.2 million fish, which was a 15 percent increase from 2020. With the estimated 8 percent dead discard rate, there is an estimate of 590,000 dead discards in 2021. Recreational total removals from the southern region are best estimated to be 1.8 million fish in 2021. In both regions about one-third of all removals in 2021 were estimated to be comprised of dead discards.

This figure shows the total removals compared to the number of fish released in both the northern and southern regions. The purple bars are total removals, and the red line is releases, both in the northern region, and the maroon bars are total removals, and the orange line is releases in the southern region.

This is all in millions of fish. In 2021, 3.8 million fish were released in the northern region, compared to the estimated total harvest plus dead discards of 890,000 fish. The number of releases last year in the northern region was similar to 2019 and 2020, varying between 3.6 and 3.8 million fish.

The number of fish released in the southern region last year increased by 40 percent from 5.3 million in 2020 to 7.4 million in 2021. This is compared to the 1.8 million fish in total removed from the southern region in 2021. Very, very briefly I just wanted to touch on a note that at the July meeting the Florida Fish and Wildlife Conservation Commission approved new management regions and regulation changes for red drum in state waters.

The real changes are shown on this slide, but Erika is going to go into further details about these changes at the end under Other Business. For the PRT recommendations, the PRT found no inconsistencies among states with regard to the FMP requirements. Both New Jersey and Delaware requested de minimis status through the annual reporting process.

As a reminder, while Amendment 2 does not include a specific method to determine whether a state qualifies for de minimis, the PRT has chosen to

evaluate individual states contribution to the fishery by comparing the two-year average of total landings of the state to that of the management unit. New Jersey and Delaware each harvested approximately 0 percent of a two-year average of total landings. As another reminder, de minimis status does not exempt either state from any requirement, but it may exempt them from future management measures implemented through Addenda to Amendment 2, as determined by the Board.

Lastly, for red drum, research and monitoring recommendations can be found in the FMP review document. They didn't change too much from last year, except for the recently completed red drum simulation assessment and peer review report that has some recommendations. I will now go over the Atlantic croaker FMP review.

We'll first look at the Atlantic croaker landings. In this figure the black line is commercial landings, and the red dash line is recreational landings, both in millions of pounds. Total Atlantic croaker harvest from New Jersey through the east coast of Florida in 2021 is estimated at 3 million pounds, which is a 39 percent decrease from 2020.

The commercial fishery harvested 32 percent of the 2021 total, and the recreational fishery harvested 68 percent of the 2021 total. This was fairly similar to 2020 when the recreational fishery also harvested a majority of the total Atlantic croaker harvest. This represents a large shift in the previous ten-year average split from 2010 to 2019 of approximately equal split between commercial and recreational.

Commercial landings have declined every year since 2010 to the lowest in the time series of around 800,000 pounds in 2020. Landings increased by 21 percent in 2021, to 970,000 pounds, which was the second lowest value in the time series, 2021 recreational landings are estimated at 5.2 million fish, and 2.0 million pounds, which is a 51 percent decrease in number of fish in fish weight from 2020.

Virginia was responsible for 36 percent of the 2021 recreational landings in numbers of fish, followed

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by North Carolina at 20 percent. In this figure the blue bars represent landings of Atlantic croaker in millions of fish, and the red bars are fish released alive, both in millions of fish. The black line is the percent of fish that were released out of the total catch.

In 2021, anglers released 27.5 million fish, which was a slight decrease from the 31.8 million fish released in 2020. However, anglers released a greater percentage of the total recreational catch in 2021, compared to 2020, with an estimated 84 percent of total recreational croaker catch released in 2021, which is the highest percentage on record, compared to 75 percent in 2020.

For the PRT recommendations, the PRT found no inconsistency among states with regards to the FMP requirements. The PRT recommends approval of the state compliance reports and de minimis status for New Jersey, Delaware, South Carolina, and Georgia commercial fisheries, and the New Jersey and Delaware recreational fisheries.

Additional research monitoring recommendations can be found in the FMP reviewed document. Some of those recommendations include research into impacts of climate change on the range of the species, and research into Atlantic croaker juvenile discard mortality for the fisheries by each gear type, in regions where removals are highest. With that, I'll be happy to take any questions.

CHAIR BATSAVAGE: Thanks, Tracey, any questions on the FMP reviews? Lynn.

MS. FEGLEY: I just had one. Did I hear you say on red drum that the Virginia landings increased 84 percent over the previous year?

MS. BAUER: Yes, from the previous year.

MS. FEGLEY: This might be directed a little bit toward Pat too. Can you tell if that is coming from the Bay or the ocean, or what percentage of that is Chesapeake?

MR. GEER: They were everywhere. There were more juveniles than we've ever seen. I mean subadults. There is much more targeting of the bulls and the cows, which is a catch and release. It's becoming more and more popular. I can speak from first-hand the number that we were catching that year.

CHAIR BATSAVAGE: Yes, thanks, there is definitely a high availability of slot size red drum in the northern zone, at least North Carolina. Although they don't have a juvenile survey in Virginia, the juvenile survey in North Carolina has been above average the last several years. Yes, I personally wasn't surprised when I saw the recreational harvest increase to the level they did in Virginia/North Carolina. Thanks for that question, any other questions? Pat.

MR. GEER: Tracey, I just have one comment about Table 1 with the regulations for Virginia's commercial regulations. We open on the 15th of January, not the 1st.

MS. BAUER: Okay, thanks, Pat, I'll make that change.

CHAIR BATSAVAGE: Erika Burgess.

MS. ERIKA BURGESS: I wanted to request that the management change section for Florida be removed from the FMP review. That applies to the 2022 fishing year and not the 2021 year, so I don't think it's appropriate to include in there. Then when you move it to the next years, I have corrections in it for you.

MS. BAUER: Okay, thanks, Erika.

CHAIR BATSAVAGE: From online, Malcolm Rhodes.

MS. TONI KERNS: Try now, Malcolm. I think he might have hung up on himself. But I do have one quick thing if I may, Mr. Chair.

CHAIR BATSAVAGE: Oh yes, go ahead, Toni.

MS. KERNS: Erika, sometimes if we know a state is going to have a future change, we do ask, in the compliance report it asks for any changes that you think you're going to be making in your upcoming fishing year, and we do include that in the FMP review. We can make sure that it notes that it is for the 2022 fishing year, and then you can give us the corrections. But we do put any upcoming changes that states know about in the FMP review, if it is available.

MS. BURGESS: Yes, we didn't submit it in our compliance report, because we were not sure what our Commission was going to approve at the time. I just don't want, even though it says 2022, it's in the 2021 report. Things get confused. Moving into the future, I would prefer it to be removed.

CHAIR BATSAVAGE: Any additional questions? If not, looking for a motion to approve the FMP reviews. Lynn.

MS. FEGLEY: I have a motion, do you want red drum and croaker together, or do you want them separate? Separate?

CHAIR BATSAVAGE: Yes, they're separate.

MS. FEGLEY: **All right, so I'll make a motion to approve the red drum FMP review for the 2021 fishing year as amended today, the state compliance reports and de minimis status for New Jersey and Delaware.**

CHAIR BATSAVAGE: Okay, motion by Lynn Fegley, second by Doug Haymans. Any discussion on the motion? Do we need to put in the as amended today in the motion for red drum? Okay, all right. **Is there any opposition to the motion? Okay, the motion passes unanimously.** Looking for a motion for the croaker. Marty Gary.

MR. MARTIN GARY: Thanks, Mr. Chair, I would be happy to offer the croaker motion. **Move to approve the Atlantic croaker FMP review for the 2021 fishing year, state compliance reports, and de minimis status for New Jersey, Delaware, South**

Carolina, and Georgia commercial fisheries, and New Jersey and Delaware recreational fisheries.

CHAIR BATSAVAGE: Second by Tom Fote. Any discussion on the motion? Any opposition to the motion? **That motion also passes unanimously.** Yes, thanks for that.

PROGRESS UPDATE ON THE BLACK DRUM BENCHMARK STOCK ASSESSMENT

CHAIR BATSAVAGE: Next on the agenda is Progress Update on the Black Drum Benchmark Stock Assessment, so I'll turn that over to Jeff Kipp. Jeff, whenever you're ready.

MR. KIPP: Yes, I'll be providing just a quick progress update here on the next few slides on the ongoing 2022 Black Drum Benchmark Stock Assessment. The major milestone the SAS has completed since I last provided an update at the May meeting was the Assessment Workshop, which was held actually at this hotel two weeks ago, July 18 through the 21st.

The overall objective of this workshop was to review the results of various assessment methods developed since the Methods Workshop in February. Some major topics covered during the workshop included finalizing our recommended stop indicator framework that will provide information on stock conditions between assessment years, and selection of the preferred assessment method, and reference points to provide management advice. A few minor changes to the preferred assessment method were recommended during the workshop, and the SAS will be meeting a final time on August 23rd via webinar to finalize the results.

For our remaining schedule looking forward, we will next hold an external peer review of the assessment in December, and then deliver the results of the assessment to this Board at the ASMFCA winter meeting next year, to be considered for management. That concludes my update here and I can take any questions on the black drum stock assessment.

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CHAIR BATSAVAGE: Thanks, Jeff, any questions for Jeff on the black drum assessment? Okay, seeing no questions, look forward to the results as you guys mentioned last meeting, busy time for stock assessments for the sciaenids. I think all of them except speckled trout are undergoing assessments, and speckled trout is undergoing assessment at the state level. Look forward to seeing all those results.

ELECT A VICE-CHAIR

CHAIR BATSAVAGE: Okay, next on the agenda is to elect a Vice-Chair. I'll look to Pat Geer to make a motion.

MR. GEER: Given that I served two terms as Chairman and two terms as Vice-Chair, I see no better person for this role as Mr. Doug Haymans from the great state of Georgia.

CHAIR BATSAVAGE: Okay, so move to nominate Doug Haymans as Vice-Chair of the Sciaenids Management Board. Can I get a second? Spud Woodward. **Any objection to the motion? I didn't think there would be. The motion passes unanimously.** Congratulations and thanks, Doug, appreciate it. I'll try to keep us on task in the next year and a half, so I don't leave you too much more work than you are already going to have.

OTHER BUSINESS

UPDATE ON RED DRUM MANAGEMENT AND RULE CHANGES IN FLORIDA

CHAIR BATSAVAGE: All right, we'll move on to Other Business. As I mentioned before, Erika would like to give an update on red drum management and rule changes in Florida, so Erika, whenever you're ready.

MS. BURGESS: I think our new Vice-Chair of the Board is going to follow me on this. A couple weeks ago Florida approved new regulations for red fish. This is following the release of our 2020 stock assessment, which found that through most of our state, we assess red drum within three regions of the state, that it was meeting our management

target of 40 percent escapement. Sorry, we assessed on four regions.

It was not in southeast Florida, which is largely driven by the Indian River Lagoon and water quality issues within that area. Following the release of the assessment we did 12 months of public engagement and rule development, in which we learned that the public did not view the health of the fishery in the same positive light that the stock assessment did.

We wanted to look at the fishery differently, so we have moved to a new form of management, where we are evaluating the fishery with six metrics. We will continue to evaluate it with escapement, which is our proxy for SPR. We're looking at relative abundance, habitat, harmful algal blooms, fishing effort and stakeholder feedback. We're doing a quantitative and qualitative assessment of those six metrics to develop management recommendations for now nine management regions within the state. We thought that nine regions were appropriate, because the fishery targets subadult fish within nearshore waters, and so for the Atlantic state's consideration, there are three regions. We have northeast Florida, which is a little bit larger than our former northeast management zone, Indian River Lagoon and southeast Florida.

We have reduced our bag limit in northeast Florida from 2 fish to 1 fish. We've reduced our vessel limit from 8 fish to 4 fish in that area. Within the Indian River Lagoon, we've gone to catch and release only, and we'll be at that until we believe we can sustain a fishery with achieving our 40 percent escapement.

In southeast Florida we are at a 1 fish bag limit, 2 fish vessel limit. All of those changes we believe remain in compliance, because they are more conservative than what the FMP requires, but it is a big shift for us, and if anyone is interested in knowing more about it, let me know. We are going to in the future apply the same approach to the management of snook and sea trout.

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CHAIR BATSAVAGE: Thanks, Erika, those are pretty big changes for management. I'll take a couple questions, so Tom.

MR. FOTE: Yes, really a lot more restrictive. I wonder, do you expect an increase in the catch and release mortality? I always think about striped bass, we've gone that way, and all of a sudden, we've been killing more fish than we're keeping.

MS. BURGESS: I don't know if we're going to have that same concern yet with red drum at 8 percent mortality. But we have seen for our snook fishery, which has very conservative regulations that catch and release mortality does exceed harvest. But we are having large increases in population in Florida, largest increases in the nation, and all of those folks coming down from the beautiful New England and Mid-Atlantic area want to go fishing. Our resources cannot necessarily support all the people who want to take a fish home.

CHAIR BATSAVAGE: Good question, Tom, yes, I appreciate that, Erika. Marty Gary.

MR. GARY: Thanks Erika for your report out on what you're doing in Florida. I'm one of those people that comes down. I was down three times in the last year to southwestern coast. First, I guess a comment. I applaud you for how you handled the complexity of the challenges there. My question is, could you expand just very briefly on the harmful algal blooms, because that is just fascinating. I've noticed that where we go when we come down, you know that is an issue at times.

MS. BURGESS: Red tide is the primary harmful algal bloom that we're looking at this time, because we can directly link it to effects on the fishery. It produces that toxin that kills the fish, and in southwest Florida from 2017 through 2019, we had almost a three year long red tide that caused major fish kills.

We experienced it in the Panhandle as well. We're looking at changes in duration and frequency. We're seeing observed increase in both categories. We know it has effect on red drum populations

particularly, because it occurs at the same time of year that we have our spawning aggregations off southwest Florida. We're monitoring those spawning aggregations, as well as our inshore population recruitment, to see how it might affect the fishery. Positive outcome, our fishery young of year surveys have not shown any long term affects from that red tide on the populations. But we're fortunate, because we do have about 20 years of data to inform us about long term affects. We don't have it for all the coast, but we do for much of southwest.

CHAIR BATSAVAGE: Appreciate that, Erika. Yes, I guess just kind of in the interest of time, if anyone else has any questions for Erika, definitely feel free to reach out to her offline. Doug Haymans.

MR. HAYMANS: Not a question for Erika, but if I could kind of trail along. Our anglers in Georgia couldn't be outdone by either South Carolina or Florida, and so this past year they've been pushing for a regulatory change for red drum, although our analyses don't show a strong need for it, we're bowing to the human dimension, and are in the process of a regulatory change.

I'll be introducing that to the Board of Natural Resources this month, with the goal of having a change effective for bag limit, vessel limit, which we've never had before, and for a captain/mate retention prohibition. We hope to have those effective in January. I'm not at liberty to really go into what we're planning until I meet with the Board, but anyway. Georgia is planning a change, and it is within the plan limits as it is now.

CHAIR BATSAVAGE: Thanks, Doug, yes, I appreciate that. Yes, I guess if things are finalized for when we meet in February, if you want to brief the Board on that like Erika did that would be great. Any other business to come before the Sciaenids Board? Tom Fote.

MR. FOTE: Yes, we're seeing the algae blooms in the freshwater lakes like we've never seen before, but on a personal note. I've lived in my house since 1979, and when I moved in, I used to have to hire somebody, I live on a Lagoon, to basically raise my

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pilings, because it was 9 inches or 10 inches of ice every winter, and they would push the pilings up as the tide would come in and out.

I would also find where my chairs went when they blew off the dock, because I didn't get out there in time, because I could see the bottom of the lagoon. Well, I haven't seen ice like that since 1989 that has been that thick. The ice boats that are sitting up in Island Heights, which is a whole warehouse full of iceboats, because that is what they used to do, has not moved on the Bay in something like 15, 20 years.

We also, I have not seen the bottom of my lagoon in the last eight years. When I look at it, it is always a cloudy soup. I get more menhaden up in my lagoon than I did before, but I don't see the bottom. We're all going to experience that as we get warmer water, and hopefully we don't get the red tides that you get in Florida, but yes, it's a real concern.

CHAIR BATSAVAGE: Yes, thanks, Tom, a lot of changes from habitat and climate level along the entire coast.

ADJOURNMENT

CHAIR BATSAVAGE: All right, well seeing no other business, I appreciate the Board's time in working through the items today. If there are no objections, I'll call the meeting adjourned. Thanks everyone.

(Whereupon the meeting adjourned at 9:25 a.m. on
Thursday, August 4, 2022)